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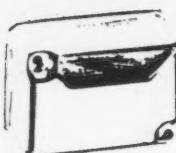
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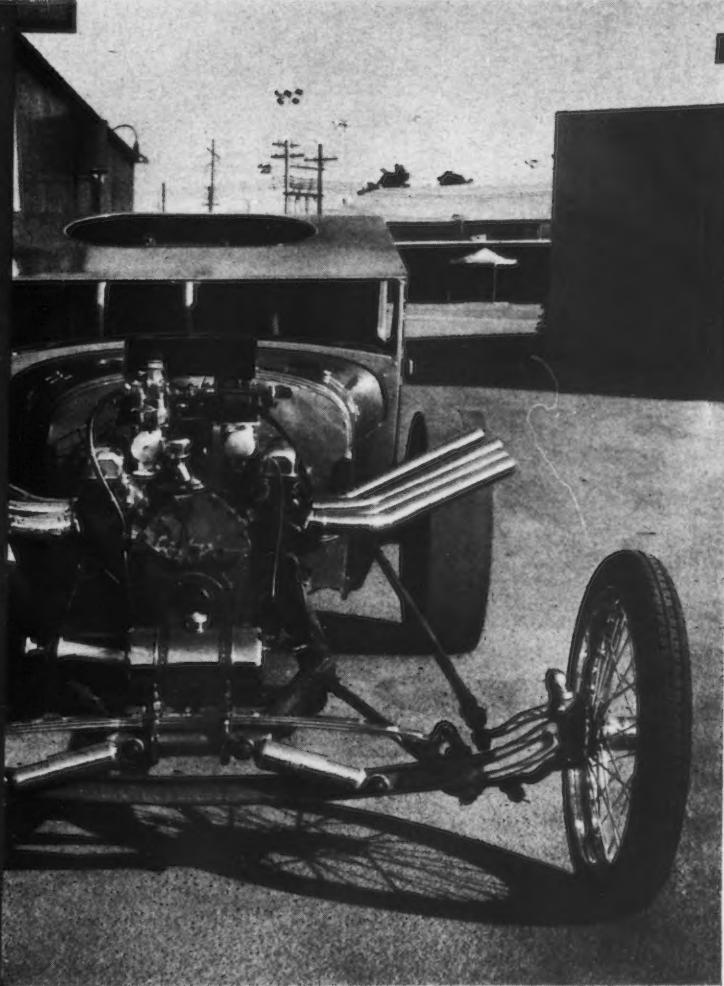
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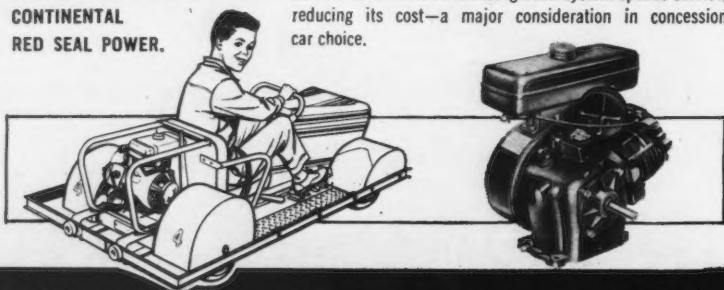
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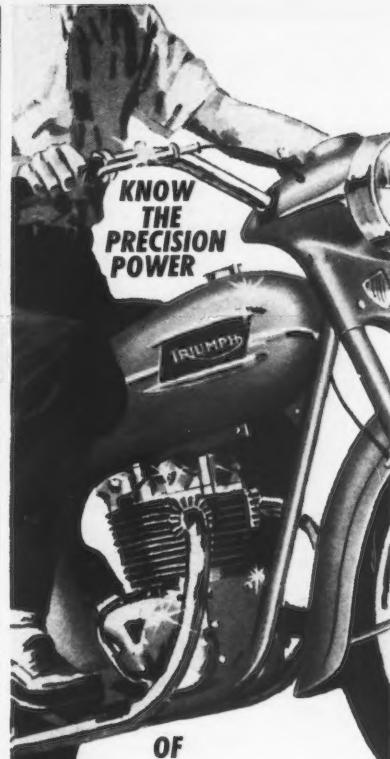
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cover

It was figured Tony Cardoza's radically reworked and colorful '59 Chevrolet Impala was deserving of a full cover. — Photo by Barris

JULY, 1961



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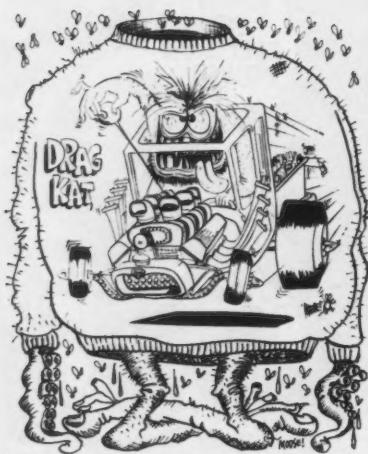
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SPEAKING

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DIPPING HIS PEN to the ink and joining the editorial staff of CAR CRAFT this month is a real enthusiast (above) by the name of Bill Neumann. To rod and custom fans along the eastern seaboard there is little need for introduction. Many will long remember a sparkling Fire Engine Red street roadster tagged the Neumann Special. One of the most outstanding show-rods ever bolted together, the '31 roadster has served as a showcase for Bill's long standing automotive enthusiasm. It's difficult to single out any one of his natural talents in one short paragraph. Building winning show-rods and customs, drag racing, karting, writing feature articles for leading automotive magazines, as well as being recognized by them for his own individual craftsmanship, are but a few highlights from his active fifteen year background. Now that we have successfully lured him from his former residence of White Plains, N.Y., and have him, the family — and the Neumann Special nestled here in Southern California, we have a sneaking suspicion that there will be somewhat of a shake up in custom auto shows along the Pacific shores once the roadster gets back into action. We wasted no time in getting Bill back into action personally as you will witness in the many car features, show coverage and how-to-do-it articles that have that informative Neumann touch in this July issue.

Our new associate editor is not the only new look to CC this month. Once your turn to the contents of the book you will see what we are referring to. Some sixteen fresh pages — plus better paper stock add up to a bonus of more features and improved reproduction. It has been one year to this issue that CAR CRAFT was stepped up to a full size magazine. The pace has also increased in tempo concerning readership, where today some fifty thousand new readers support CAR CRAFT with additional newsstand sales and subscriptions. This acceptance is very gratifying to us, adding to the continued growth of CAR CRAFT — a leader in the field of rod and custom coverage.

The National Hot Rod Association has announced September 1, 2, 3 & 4 as dates for hot rodding's "Big-Go" — the 7th Annual National Championship Drag Races. Location for this year's huge four day pre-Labor Day racing program has been moved to Indianapolis where new facilities, known as the Indianapolis Raceway Park, have been approved by NHRA officials. Three thousand and seven hundred feet of brand new asphalt, streamlined operations and pit and spectator facilities surpassing that of all previous national sites, await this year's number-one-event for hot rodders. Additional details can be found on page 68. — Dick Day

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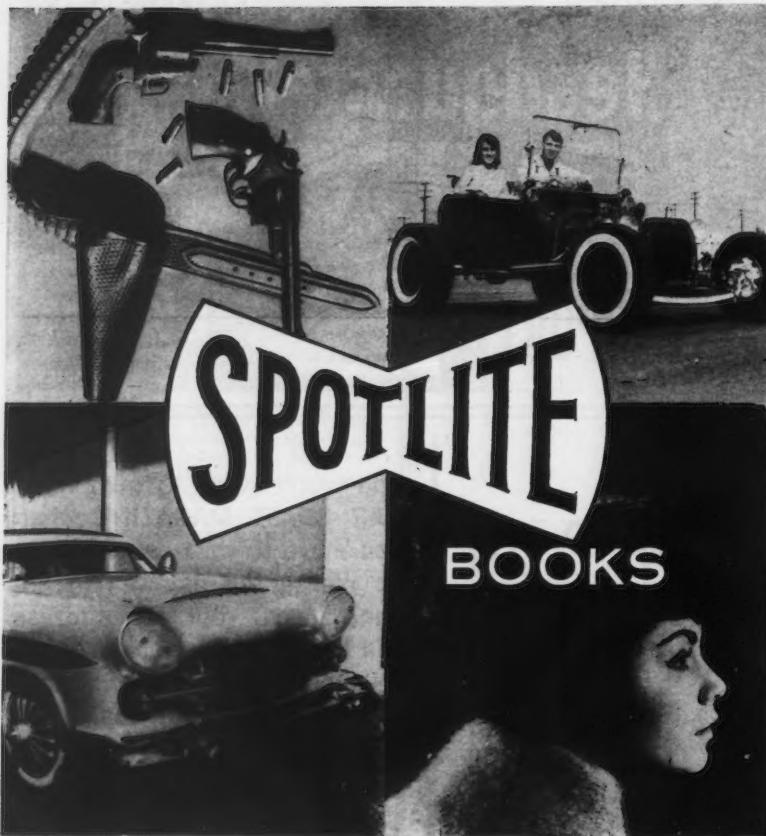
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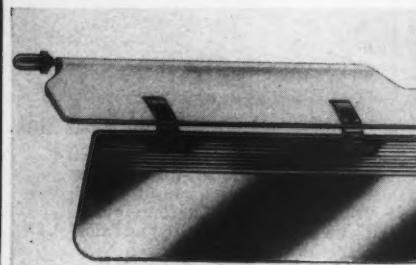
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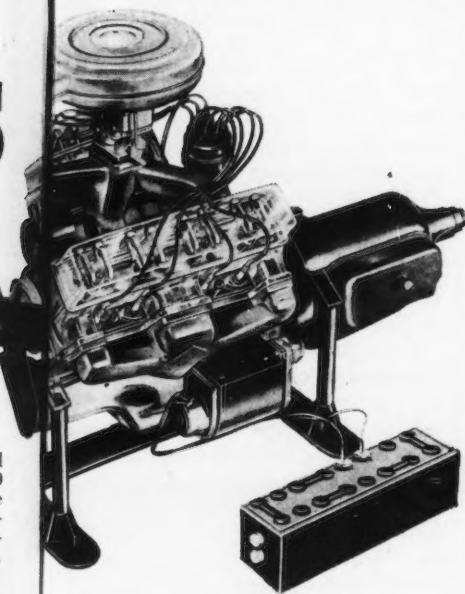
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WHAT IS IT?

Dear Sir:

Enclosed you will find a picture of a chromed engine. Would you please



tell us what the chrome part on top of the engine is?

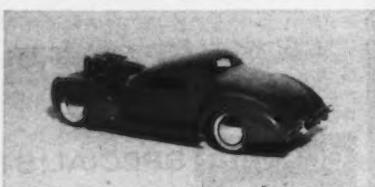
— *Tommy Ace Wallace
Middletown, Ohio*

It's a chrome pressure box sealing the carbs. All the small chrome tubes feed the air from the McCulloch blower to the carbs instead of one big pipe. This set up is strictly for show. — Ed.

COOL COMBO

Dear Sir:

I am hoping that these two models rate a spot in a great magazine. One is an orange '40 Ford which is sectioned and chopped. I also shaved



the deck, and mounted tunneled tail-lights. The other is a burgundy deuce with full-race Chrysler mill. The radiator was mounted horizontally, and a molded custom hood added.



Thanks for a good view of today's cars through your interesting magazine.

— *Bill Rome
Baldwin, L.I., N.Y.*

WE GOOFED

Dear Sir:

I was just reading your December issue of CC, and on page 21, Showtime U.S.A. you have a picture of Roth's Outlaw. It said "roadster features chromed Chev mill." In your January '60 issue you stated "that it has a '50 Cad mill." What gives? Did he make a swap, or did you foul up? Besides a few mistakes like this, I think your magazine is tops. Thanks loads for giving us rodders an outstanding magazine to look forward to every month.

— *Ken Pyle
Seattle, Wash.*

It's still a '50 Caddy. — Ed.

SOUTHERN '55

Dear Sir:

Enclosed are pictures of my blue '55 Ford. I hope they are worthy of publication in your magazine. My car the "Scalloping Ghost" has been nosed and decked, 14" wheels, bumper guards removed, the grille has been extended, and has cabinet



pulls on it. The car has been lowered two inches all around, and also features '59 Caddy taillights, full length lakes plugs, and '59 Dodge hubcaps which are color chromed with bullets added. The blended scallops and striping are by Larry Watson.

— *Wayne Sides
Jasper, Ala.*

TO EACH HIS OWN

Dear Sir:

I wonder if you will be brave enough to print this in an up and coming issue? I buy your mag every month, because I feel it is worth twenty-five cents for a good laugh. If what is featured in every issue of CC is considered beautiful, somebody needs help. In your Feb. '61 issue you had the ten best customs. The only thing fairly good in that list was the Predicta. I laughed for hours at John Buchan's '56 Chevy, and Bob Sanchez's '54 Ford pickup. I feel they each need a psychiatrist. Why the fins, excess chrome and ridiculous paint? Imagine if Pinin Farina de-

signed a Ferrari like these idiots design cars. In most cases they pick the wrong cars anyway. How about '53-'55 Studebakers and '56-'61 Hawks? Why even '50-'51 Studebakers would be an improvement.

— Joe Gnautz
Brooklyn, N.Y.

It's usually the ones who have nothing that put their mouth in gear before engaging brain. — Ed.

HAVE PIZZA — WILL TRAVEL

Dear Sir:

When I picked up last month's issue I was really surprised to find an answer to my letter on fadeway antennas. I wasn't putting you on as you claim. I own Hideaway Pizza, in the Bronx. As far as I know I am the only one who delivers pizza's with a



semi custom. Enclosed is a picture of my '57 Ford. It is nosed, decked and frenched lights via '56 Ford truck rims. I'd get a great charge in seeing my load in your magazine. P.S. If you ever get around here drop in for a pie on the house.

— Manny L. Goldberg
Hideaway Pizza
Bronx, N.Y.

Have a charge on us. I like mine with mushrooms. — Ed.

LIKES THE RESTYLE

Dear Sir:

This is the first chance I have had to congratulate you people on a job well done. I think your magazine is one of the finest in its field. You have a good balance of customs, rods, and technical information.

I would like to comment favorably of course upon the restyling article you did on the T-Bird, (Dec. '60). The wild half of your article is the most pleasing restyling job I have ever seen. Bob has turned an eye sore into an eye pleaser. My one question is, is what you have done possible within reasonable limits?

Again congratulations on a fine magazine.

— Charles M. Newman
Blairstown, N.J.

Bob Hubbach has done an interesting version of restyling the T-Bird, and anything is possible. I wouldn't stick my neck out, and quote any prices. — Ed.

JAM PACKED



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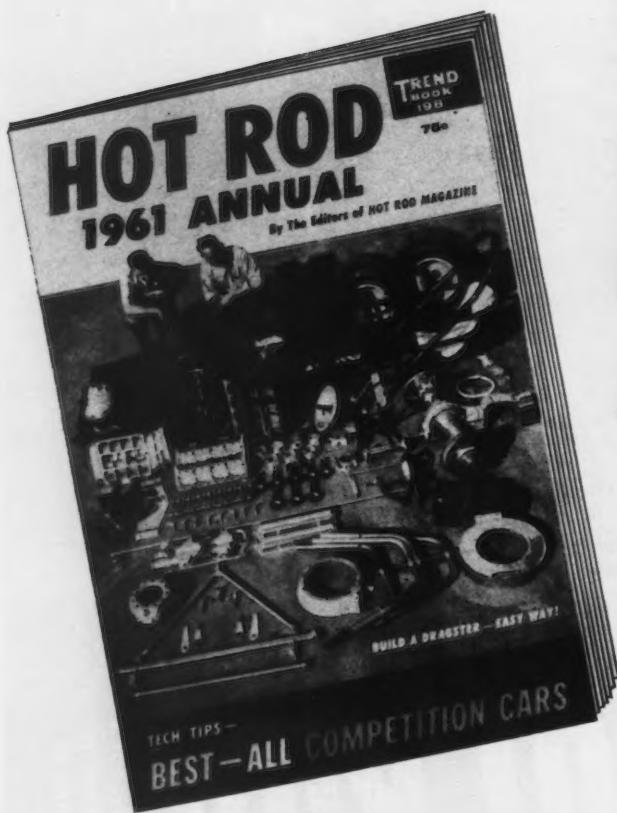
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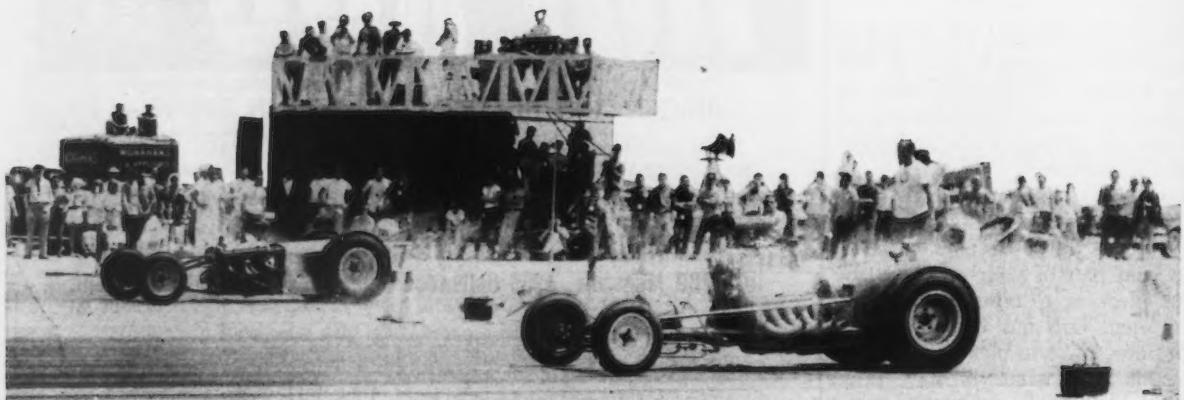
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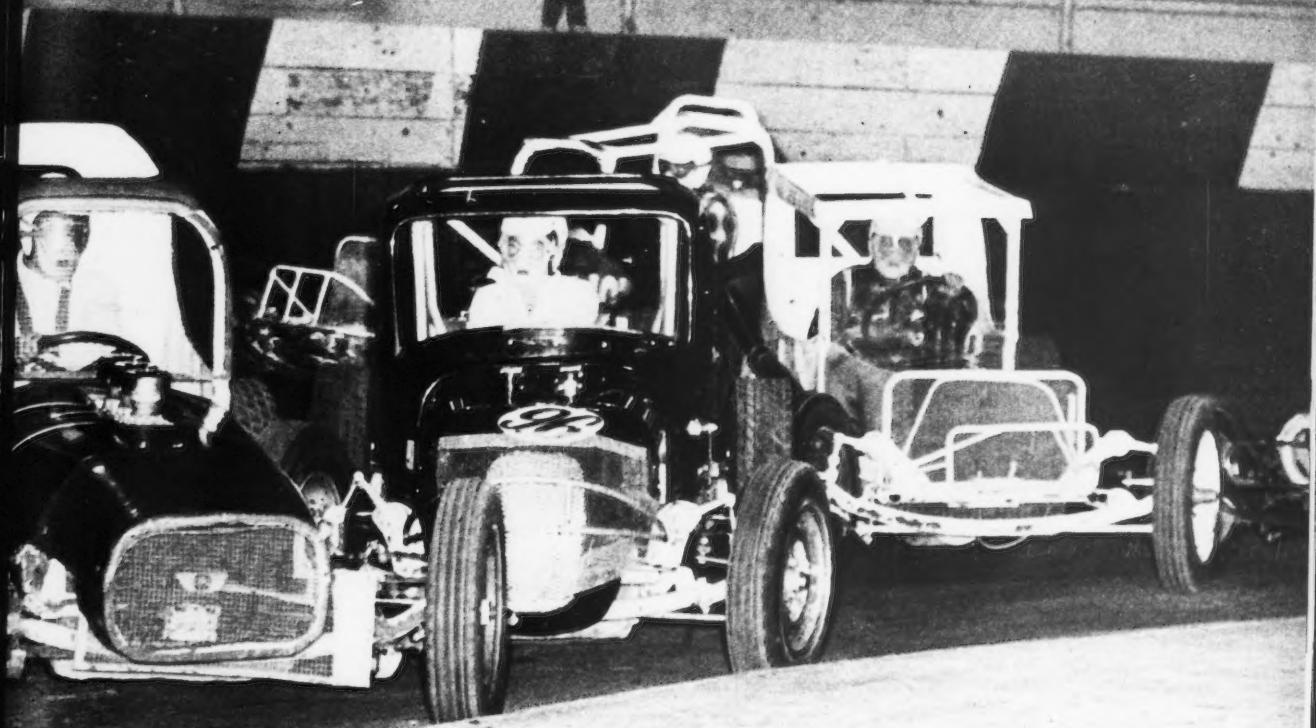
75c





WHEEL WHEEL

A thrilling breed of racing and brute power machinery are combined in the crowd-pleasing "Sportsmen"



By John McDonald

MODIFIED SPORTSMEN drivers and owners have struck gold in San Diego, California. The popular little bombs—a conglomeration of sprints, roadsters, jalopies and midgets all rolled into one—enjoyed their biggest success in the border city last year when some 170,000 fans poured through the turnstiles. The 'gold' was in the form of \$70,000 in prize money.

The sportsmen of the San Diego Racing Association will be forced into a shorter season in 1961 at the quarter-mile track in Balboa Stadium but can look forward to a new half-mile oval on Kearny Mesa which is scheduled to be open around September 1.

Balboa Stadium, home of the speedsters since their inception in 1958, is in the process of being converted

into the permanent location of the San Diego Chargers.

Promoters Tom Haynes and Frank Guthrie, who have handled all racing in the 20,000-seat Balboa Stadium since 1939, are heading a syndicate which will construct the new plant, some 10 miles from the heart of San Diego. The half-mile oval should be best suited for the sportsmen, according to Chuck Morris, perennial president of the San Diego Racing Association. "We'll remove the flywheels and then the fans should really be in for a treat," he said.

As an example, earlier this year three-time champion Art Pratt of Escondido reached 130 miles per hour on the straightaway of the Phoenix fairgrounds oval with

CONTINUED

"sportsmen" are a shot-in-the-arm for track racing



Huge crowd is on hand for the opening race of the 1960 season at Balboa stadium, in San Diego. Enthusiastic fans wait impatiently for the starter to drop the green flag sending these high powered sportsmen into wild action on $\frac{1}{4}$ mile oval.

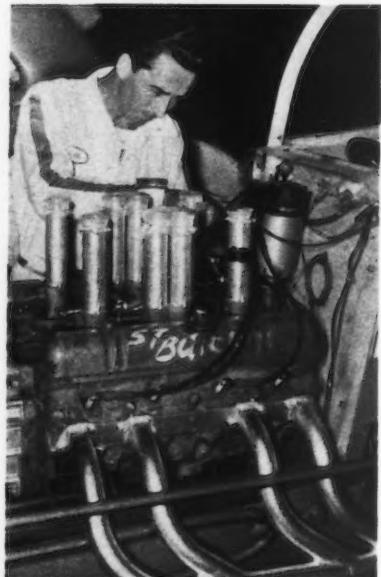
a Hilborn-injected 1959 Buick-powered car. Actually, it was Pratt, a foreign car mechanic, and car-owner Ben Sanders who pioneered the sport in San Diego. But the idea was borrowed from Arizona. The Arizona Racing Association came up with a new division, known as "Fullhouse Jalopies" in 1956. Sanders and Pratt were truly impressed when they visited Phoenix to watch these high-powered jalops. Since they were searching for something to replace their own standard stocks of the 1932 to 1934 vintage this was an eye-opener.

The crowds had dwindled in San Diego because the drivers had become so experienced that fans tired of a straight racing show. Like wrestling fans these people came for excitement. There were fewer crackups and less thrills. The modifieds were soon to put the thrill back in racing for San Diegans. And, on occasion, throngs of 14,000 were on hand.

Even Arizona had to borrow the idea from another area. "We really got going on the idea when Milton Brock of Albuquerque, New Mexico, brought his 1932 Ford coupe with an Olds 88 engine for a race at Phoenix and, needless to say, he blew the rest of the cars off the track," reports Karl Connally, Director of Publicity of the Arizona Racing Association.

"The first 'Fullhouse' jobs were driven on Phoenix tracks in 1956," Connally added. "The first cars built specially for this type of racing were in 1958, with the two most prominent cars being the Fike Plumbing Special driven by Wayne Weiler and Dutton Special driven by Harry Bechtel."

The huge success of these high-powered cars bears a striking resemblance to the young days of midget auto racing. The midgets of the mid 1930's were modeled after the Millers and Deusenberg's of the big tracks but were propelled by a vari-



Art Pratt three time champion 1958-59-60, is also the owner and mechanic for car #1. Here Art makes a final adjustment on his much modified Buick mill.

Broad sliding through the turn neck and neck, and battling for the lead in the main event are Bob Hogle driving car #42 and Bud Sterrett driving car #81. Much action is wild and tense as can be seen in photos. Drivers are masked for protection against the flying dirt.

Sturdy front end is shown on car #49 owned by Ronnie Goodsell. Good welds and beefie parts are needed as things get a little rough at times. Front ends are much the same as used on sprints and big cars with a dropped tube axle, radius rods, heavy springs and shocks. Torsion bars also used on some cars.



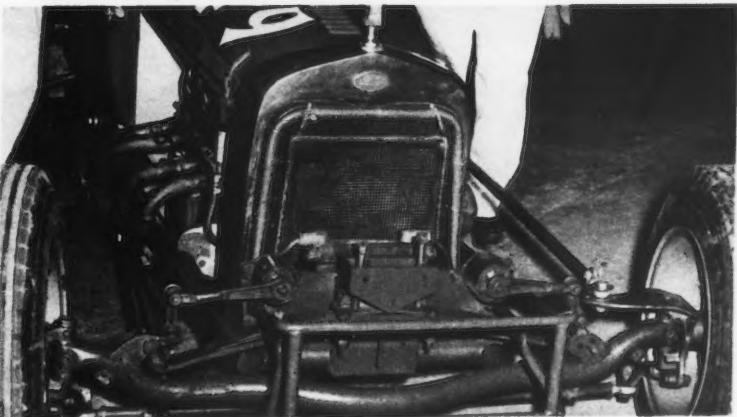
WHEEL TO WHEEL

ety of cut-down passenger car engines or motorcycle powerplants. Star, Chevy, Ford, Willys and other four-cylinder types could be reduced in displacement sufficiently to comply with the scanty rules while air cooled Indian and Harley Davidsons were ideal.

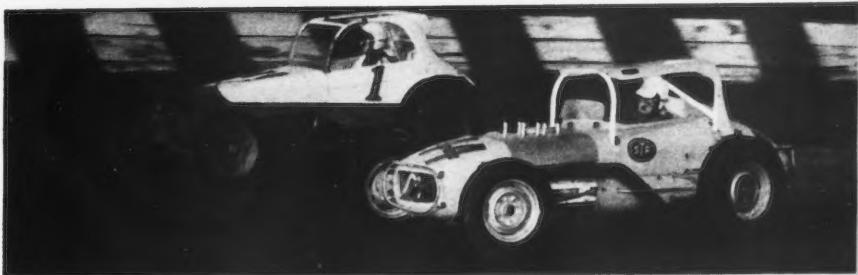
At first, the sportsmen were introduced in competition with the jalopies and they caught on immediately. By 1958, the transition was complete and the fans began swarming the stadium once again. Much like the young midgets, fans were treated to variety.

Most of San Diego's garages became laboratories where experiments were tried and later applied to the tight-turned quarter mile oval. Don Thomas of El Cajon, as an example, built a roadster-type body with a removable cab for sprint car races. Top or not these bombs were soon to come mighty close to the records established by the Offenhauser-powered sprints on half-mile tracks in California and Arizona. Mostly, the cars are powered with 1958-61 engines. However, some still rely on "old" 1948 powerplants.

Fans began to throng the pit area after the races to see what the owners had devised for speed. They found Buicks, Oldsmobiles, Mercs, Plymouths, Pontiacs, Cadillacs, Fords and Chevrolets as the popular engine types. Earlier a 1955 Jaguar and a '53 GMC were tried by members of the SDRA.



Photos by Bob Hardee



Don Thomas in car #44, and champion Art Pratt wheeling car #1 at a blistering pace at Ascot Stadium in L.A. Cars resemble sprints or Indy type roadsters, some are just boxed in T's or A's, car #1 uses a Fiat body, homemade front.



Gordon Hamilton, also owner, driver, mechanic, works over McCulloch blown Chev powered sportsman. Pressure box is ideal in keeping dirt out of carbs, blower draws air from inside cockpit. Dirt clogging carbs, injectors, and radiators is mechanics' biggest headache.

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WHEEL TO WHEEL

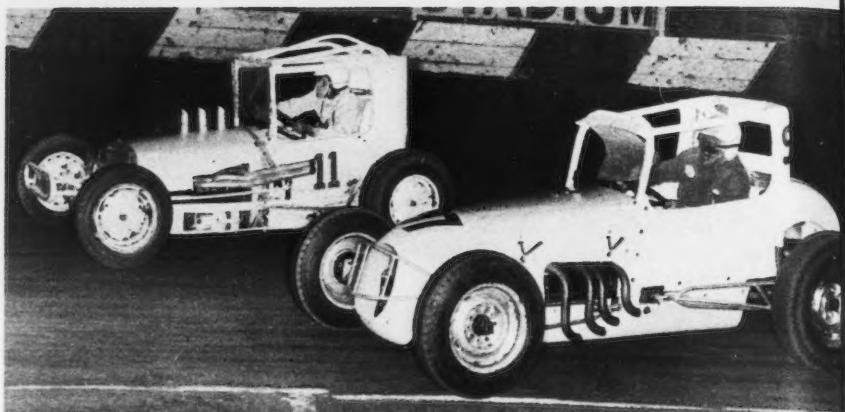
It was a new experience for 95 per cent of the pilots in the association who had only jalopy experience. At first there were the usual handling problems, and, for the most part, the cars had too much power for the short track. The one-time jalopy drivers, whose equipment before came at bargain basement prices, found that it was more expensive when their cars ripped out sections of crash-wall.

"These bodies were designed for safety," said Sanders, who helped pioneer the speed sport in San Diego, "but they are also distinctive." From the front these cars resembled sprints, Formula I foreign cars and Indianapolis-type roadsters. Some are chopped down, boxed-in Model T's, others were reworked 1932-34 Jalopy frames. And, this didn't stop such car builders as Hank Henry in Ramona and Rip Erikson in San Fernando from blue-printing radical designs.

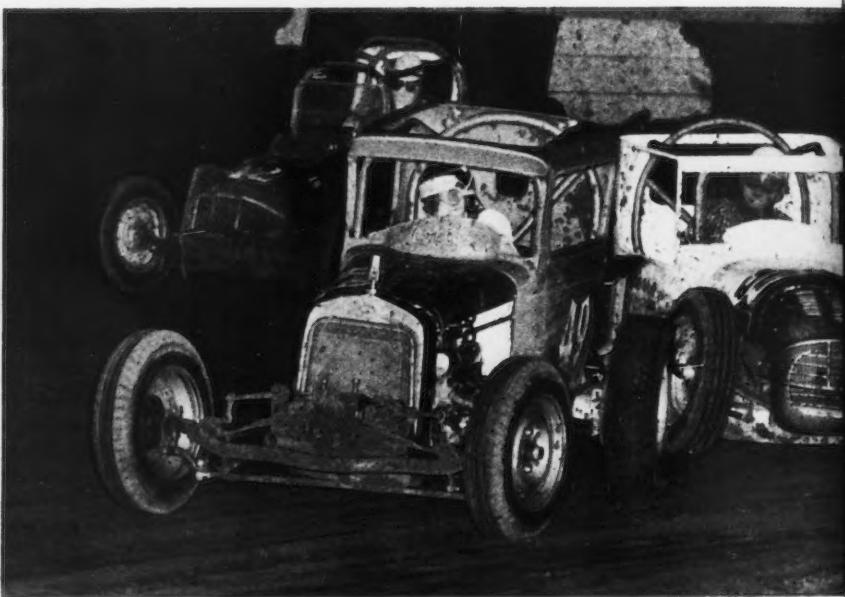
Average price for these new creations is \$3,000. However, owners Tom Jackman of El Cajon, Mel Allen of Long Beach, Jud May of San Diego and Omar Danielson of South Gate invested more than \$7,500 in new cars. Pratt, a resourceful type, found success in a big way with a 1957 Buick engine with a Mercedes gearbox. The body was an old Fiat. It soon became a richer man's sport. In comparison, jalopy engines cost between \$200 and \$300 while Sportsmen are over \$1,000. Jalopy frames cost \$25 as compared to \$800 to \$1,000 for modifieds.

Ten to 15 new cars have been constructed for this season and with interest catching on in many parts of California and Arizona, the SDRA should have over 100 cars at season's end. "We find the boys are more enthused about racing," one San Diego Racing Association official remarked. "But the additional costs keep several cars in garages much longer for repairs."

Whether this new form of racing produces another Troy Ruttman, Jim Rathmann or Billy Vukovich is problematical. But, for the San Diego racing fan, he's definitely found something he likes. Those big attendance figures are indelible stamps of approval.



Battling it out through the turn is Jim Hurtubise in car #97 and Jim Cox tooling car #11. Cars are built for safety as can be seen with sturdy roll bars and the fully caged cockpits. Screen in front of driver protects him from flying rocks.

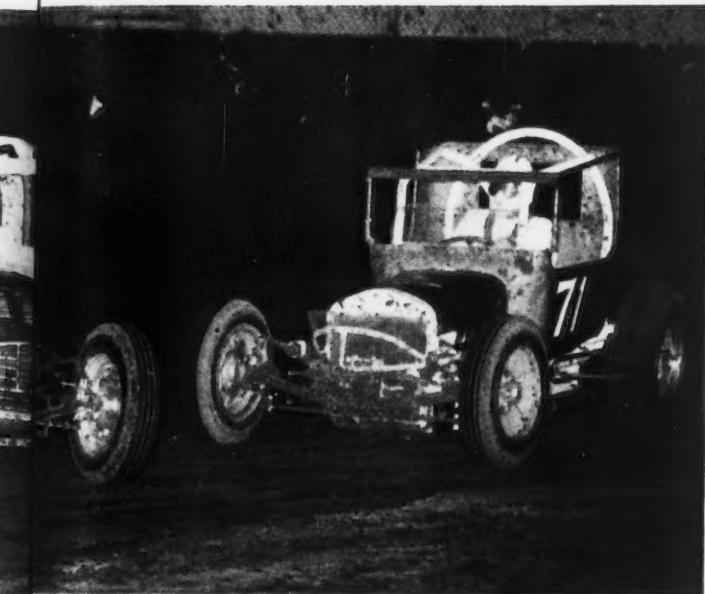


Old flatheads never die. This '48 Ford block is fitted with an Arduin overhead conversion unit. Properly set up these still give the late model overheads a run for the money. Dirt clogged screen on the grille protects radiator from boiling.

Jack McCoy in car #2 leads through turn with Don Thomas and Glen Hoagland behind. Action is fast and furious as cars really get rolling powered with big late model V8 engines, much hp.

Below, Tense action as car #90 driven by Jim Wood tangles with Ron Goodsell in #49. On the outside is Bob Hogle in #42, and coming in rear is car #71 driven by Don Edmunds. Brakes are two wheeled on rear. Note round roll bars.

Below right. Looking over the program you will notice many famous drivers' names. Picture is Louis Unser who drove car #67. Lou won Pike's Peak in 1960.



Movable body makes engine work easy for George Sotier and Everett Nelson on car #31, driven by Bob Belcher. Car is driven by Chevy mill, coupled to in-out box, quick change.

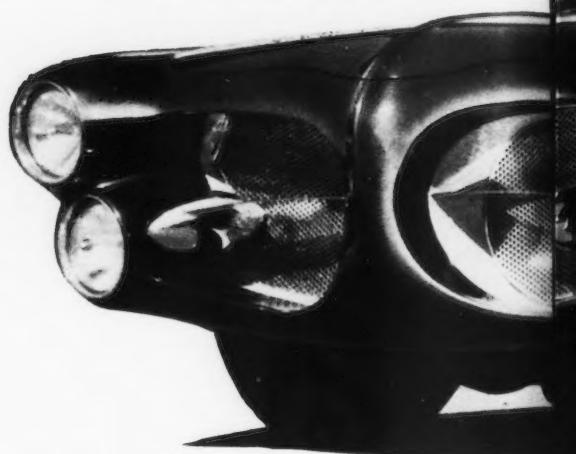


Don Shepherd and Parnelli Jones — driver, push car #97 owned by Omar Danielson from trailer. Car powered by late Ford engine. Well constructed car is typical sportsman.

FROM DRAWING BOARD TO CUSTOM

One of the freshest restyling jobs we have seen in a long time is this '59 Chev Impala owned by Tony Cardoza of San Jose, Calif. Fine body work was carried out by Cusheenberry Customs of Monterey. Note the attention to detail.

Front and rear grille theme is carried out identical. Car is completely void of all side chrome trim. Doors, hood and trunk are operated electrically. Roof fins are styled to match fender fins, and give car an interesting appearance.





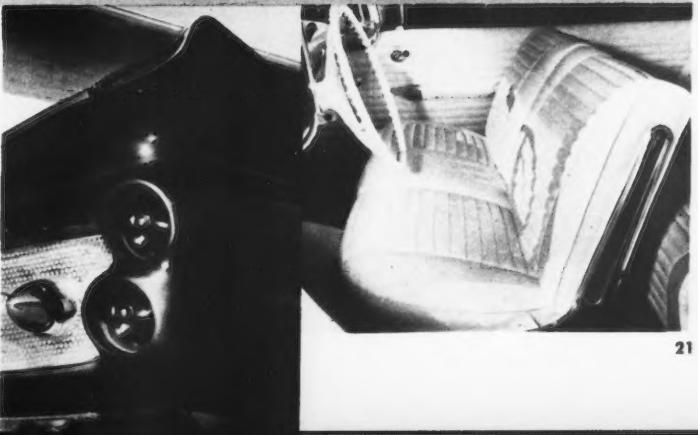
Right. Front end is well designed with flowing lines. Peaked hood is blended into lower rolled pan, and corners are nicely rounded. Grille is of chrome mesh with floating bar and bullets. '51 Merc ring is used to french and tunnel lights.

Below. The smooth look is the styling theme used throughout construction, and is set off by a brilliant Shocked-Red lacquer paint. Car is lowered by coil straps up front and a Z'd frame in the rear. Chromed and reversed wheels run.

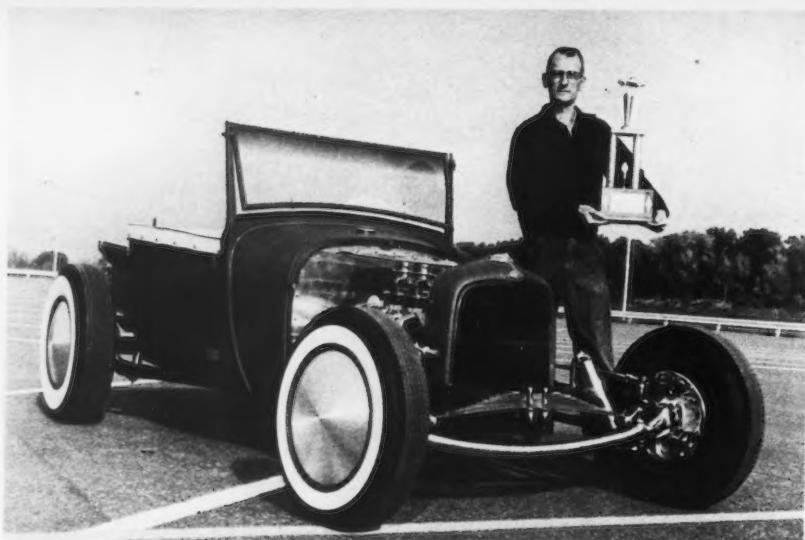


Right. Scoops are tastefully worked into roof, and fender tips. Aerial is also concealed in roof fin. Lucas taillights are tunneled and frenched in extended rear fender. Rear pan is also rolled.

Far right. Rolled and pleated white Naugahyde is used on seats, side panels, headliner. Dash and steering wheel has also been done in white. Moldings are chromed. Upholstery by Mangen.

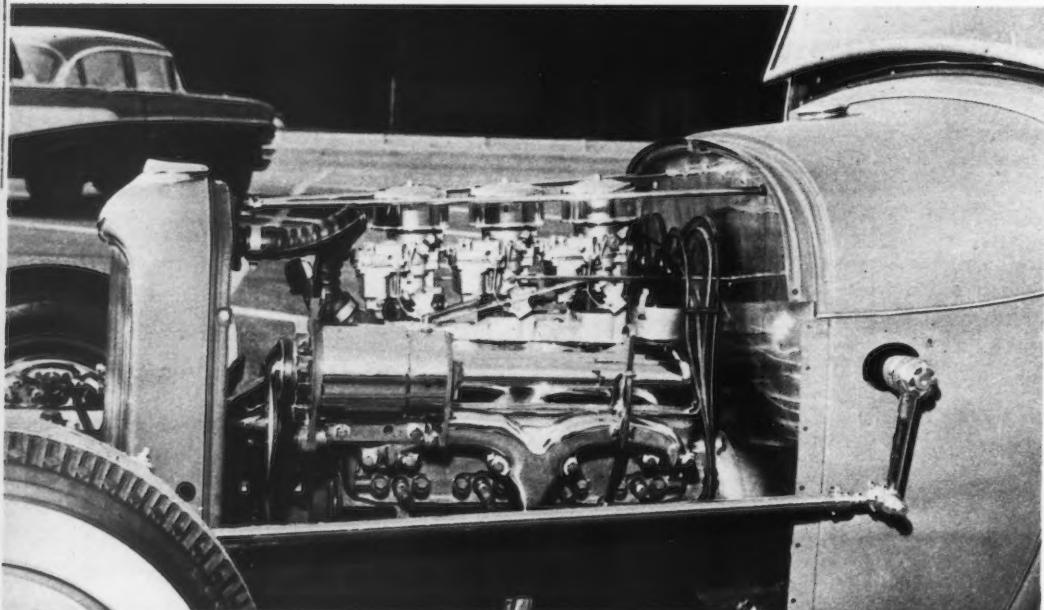


Photos by George Barris



THIS
attention getting
JEWEL
was created
because
Charles Wright...

ALWAYS WANTED A ROD



Top. After an investment of \$1000, a year's labor, Chuck Wright of Boonville, Inc., finally finished this trim 'A' hauler. His first show, car won second place in its class.

Lots of chrome goodies dress up the '56 Chev mill. Engine is 301 inches, running McGurk pistons, and cam, oversize valves, and an Offy three pot manifold. Heads are ported and polished with a 11:1 ratio. Firewall is of aluminum.

One of car's most outstanding features is the handmade solid black walnut bed. Chrome brackets, and bed runners reflect wood's high finish. Full tarp covers driver's cockpit.

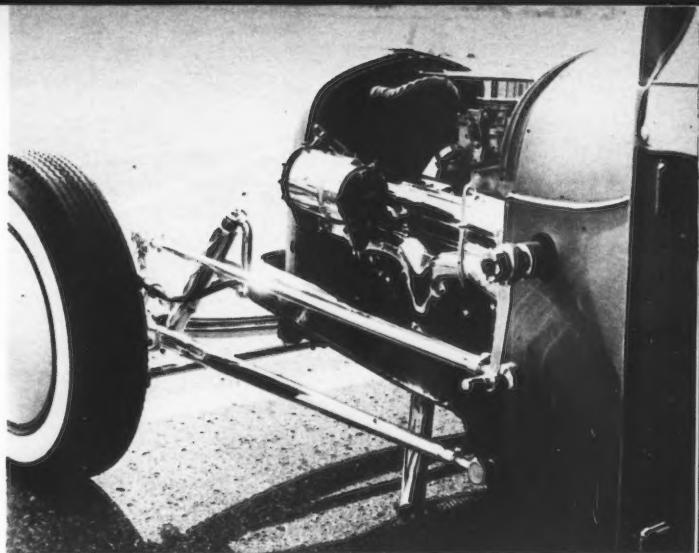


Right. Steering is by '52 Ford truck. Rodders please note level position of drag link. It steers real easy. Chrome split wishbones, mounted to sturdy frame plate.

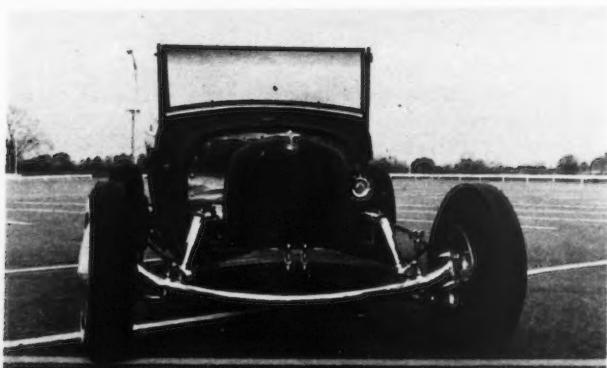
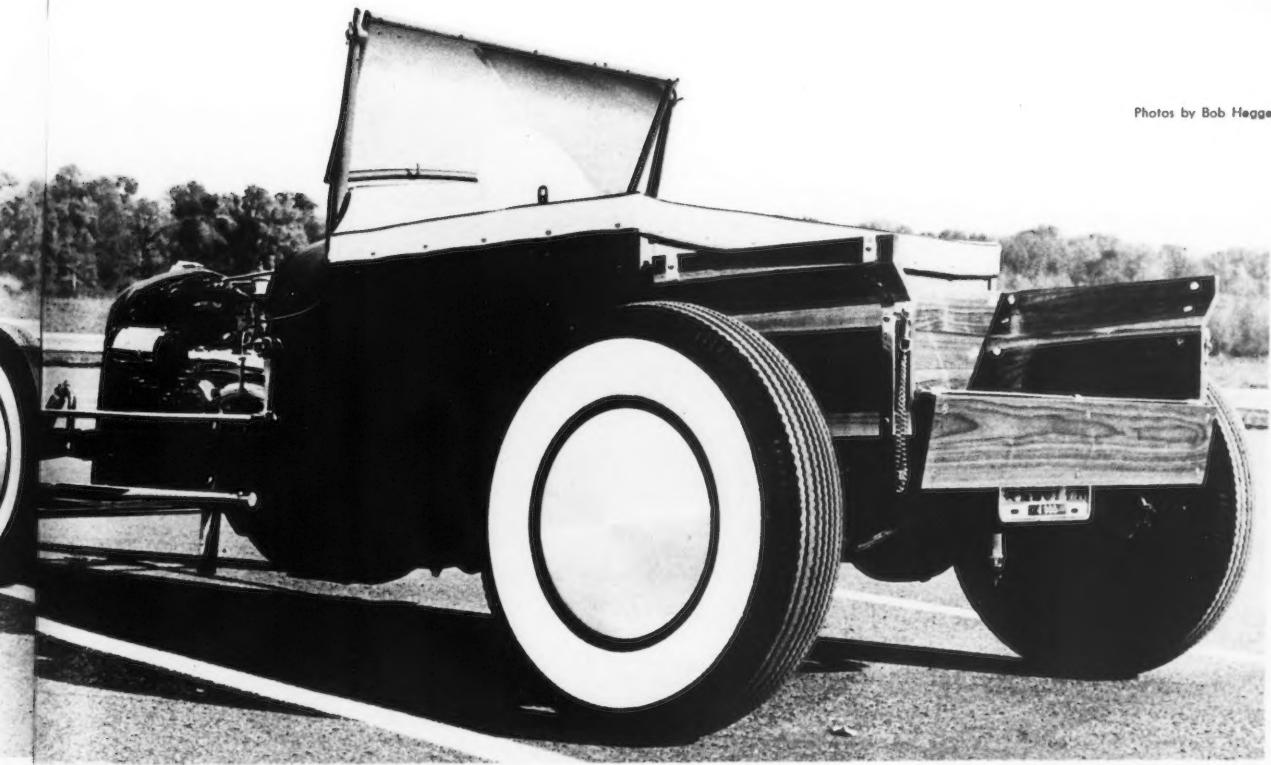
Below. Clean lines and neat workmanship is very much apparent throughout truck. Tires are 5:60 x 15 front, 7:60 x 15 rear on reversed Lincoln rims. Rear end is '48 Merc with a 3:78 ratio. Wheelbase is 97 1/2 inches.

Bottom. Front end features a full chrome treatment. Axle is a '37 Ford tube with '40 Merc backing plates. Spindles are '48 Merc with steering arm welded on top. It should be noted that the welding of critical front end or steering parts is definitely not recommended.

Bottom right. Tubular front cross member mounts spring forward of frame using Monroe double action snubbers. Frame has also been Z'd front and rear, and body channeled six inches. Grille is '32 Ford chopped on bottom.



Photos by Bob Hegge





ED DAVIS' STOCK-BODIED CORVETTE TURNS A RAPID 123 MPH IN 11 SECOND BRACKET

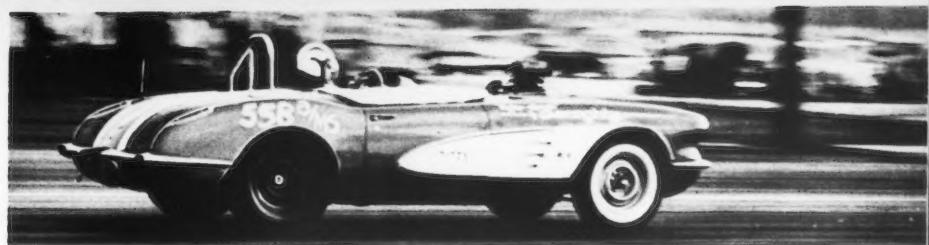
By John Geraghty

A CORVETTE TURNING speeds up to 110 mph in the quarter mile is fairly commonplace today. But it takes more than just a little doing to come out at the far end of a drag strip at better than 123 mph in the eleven second e.t. bracket. This is especially so when you consider its 1300 pound chassis. Even more impressive, this car has a potential of approximately 130 mph with some extensive tuning and an increase in manifold boost. This is the type of performance that makes

Ed Davis' world's fastest stock bodied Corvette a standout on any drag strip starting line. Ed's Corvette has an outstanding history of victories since 1958, when the chassis was originally purchased with the idea of sports car racing in mind. Driven by Cal Bailey, a popular West Coast driver, and tuned by Geraghty Automotive, the Corvette broke and held track records at both Santa Barbara and Riverside, California road race courses. Then Ed's interest turned to drag racing, where

he could compete in the cockpit.

Although the Sunday stock sports car trophies came easy, Ed wasn't content with the 104-106 miles per hour speeds and decided to modify his engine and enter a higher class. It was decided because of the super sport suspension and other heavy sport car accessories that 'B' Modified Sports would be the better class to compete in. This would allow the weight per cubic inches to be used advantageously. It was decided a small 'C' class engine equipped with



in the quarter

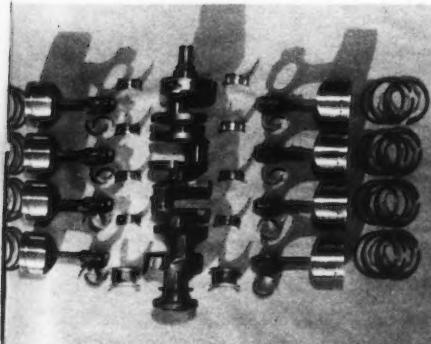
a supercharger would produce the highest possible horsepower output for a B class engine combination. A B&M hydramatic transmission would be used in conjunction with a 5.17 rear axle ratio and M&H Race-master tires. This combination would best transmit the engine torque to the asphalt, producing the necessary traction. Needing additional weight in the rear, an increase in cubic inches could be used to retain the maximum allowed weight per cubic inch ratio. Therefore a $\frac{1}{4}$ " additional stroke with the stock bore engine would be assembled which would produce every possible measure of horsepower along with a flexible high rpm power curve, and yet retain enough of a safety factor to assure dependability.

The first step in assembly of this

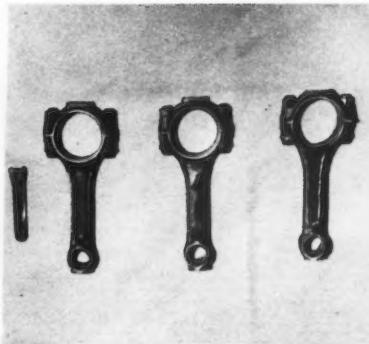
engine was to attain a stock bore 57-60 block with no cylinder wear. The block was X-rayed and pressure checked for cracks, boiled and made ready for boring. A set of Forged-true Pistons $3\frac{3}{8}$ " bore, $\frac{3}{8}$ " low center were ordered with .007 wall clearance. The block was bored .005 for cleanup producing .012 total clearance which would assure minimum friction loss at high rpm. The $\frac{3}{8}$ " low center would drop this piston head $\frac{1}{8}$ " below the block surface, lowering compression to 8-1, reducing the tendency to detonation with high manifold boost pressures obtained through supercharging. C-T Automotive furnished one of their famous stroked crankshafts and boxed reinforced rod sets. The crank was magnafluxed and X-rayed before and after stroking, then hard

chromed for bearing life. The rods were also magnafluxed before and after modification, then neutralized to relieve any stress that might have been incurred through welding and brought back to the original Rockwell of a stock rod.

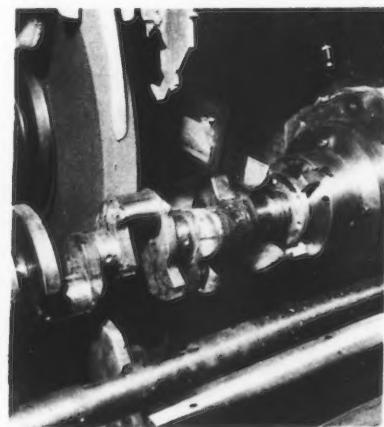
The assembly was then balanced within $\frac{1}{2}$ gram, the pins fitted and rods aligned. Full floating type pin fit was used to insure against high friction adhesion between the aluminum and steel surfaces. Moraine 400 bearings were used throughout the engine along with Grant rings. Jack Engle of Engle Cams was consulted in selecting the grind most suitable for this combination. A 124 hard face overlay and kit was used to produce the necessary valve timing to allow the modified Chevrolet to breathe freely. Before assembly of the engine



C-T $\frac{1}{4}$ " hardchrome stroke crankshaft used with Moraine bearings, Grant rings, Forged-true pistons and C-T rods.



Steps taken in construction of boxed rods. From left to right, plates and rods magnafluxed, welded, then relieved.



The stroker crankshaft is receiving the rough grinding of the crank journals. Note un-ground welded crank journal.

Quick in the quarter

Candy Apple Corvette is owned and driven by Ed Davis, tuned by Geraghty Automotive. It recently turned in an e.t. of 11.88 and is being refined more each week to attain the 130 mph mark.



Photos by Pat Brollier

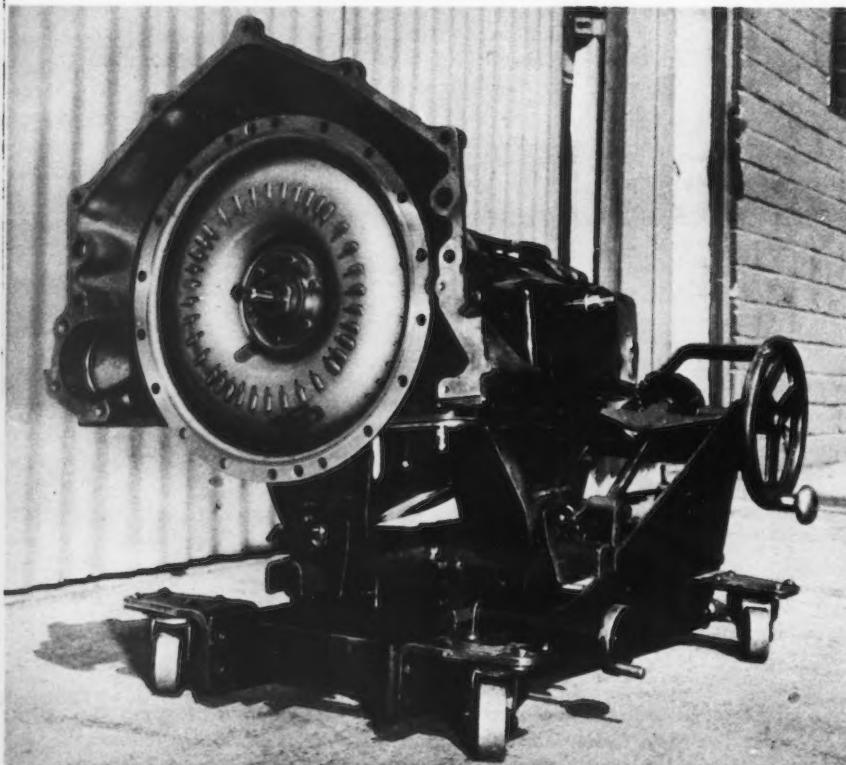
a special O ring grooming tool was obtained from Dragmaster Company and O ring grooves were cut in the block surface to assure proper head gasket sealing.

The main caps were milled flat on their lower edge and fitted with $\frac{7}{16}$ " by $\frac{7}{16}$ " steel reinforcing straps to reduce the chance of main cap breakage. High test hex head capscrews were used to torque the main cap assemblies to the block at 90 foot pounds. Main bearing clearances were held to .0025. Rod bearings also were held to .0025 with additional

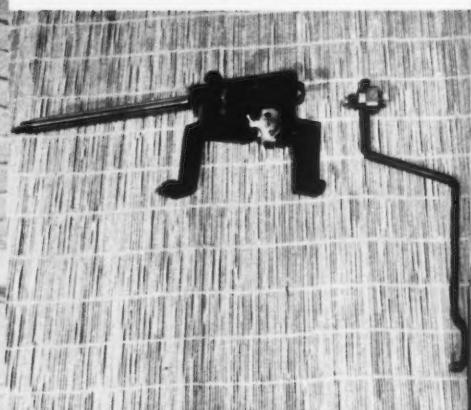
end clearances of .008 accomplished in the crankshaft finish grind. 40 foot pounds was used for rod bolt tension. End play was held to .004. Piston ring gaps of .015 were used to assure proper heat expansion area and sealing.

1959-60 fuel injection cylinder heads were used for two reasons: the lower compression and the water cooled spark plugs. $\frac{1}{8}$ " oversize intake and exhaust valves were used and the heads ported thoroughly. The intake center divider was removed to increase the port area to

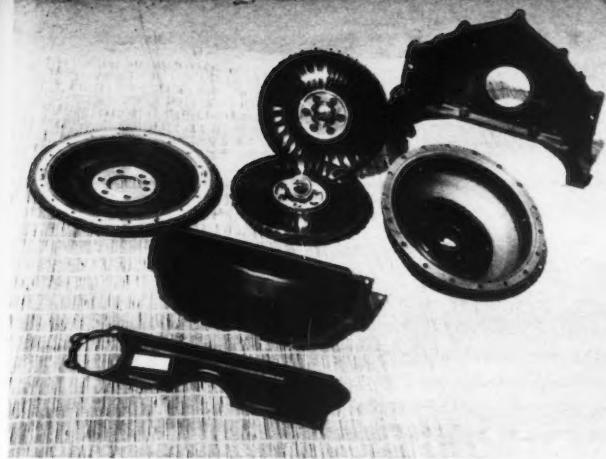
maximum size. 18 gauge wire was cut and formed into the 'O' ring grooves cut into the cylinder block surface. $\frac{1}{16}$ " Velmoloide was used as the head gasket material. A stock cylinder head gasket was taken as a pattern and all water holes were marked and cut. A gasket sealer was applied to each side of the gasket and the heads installed. Steel washers were used on the lower row of cylinder head capscrews to prevent breakage of the head casting at higher torque pressures. The cylinder heads were tightened from the



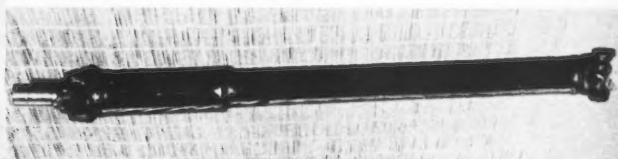
A heavy duty B&M blower-type supercharger hydramatic unit was installed in the Corvette to increase acceleration off the line and help eliminate shifting errors that go with poor traction cars.



A special shift selector assembly is available through B&M for their stick hydramatic units that allow much more sensitive feel of each gear selection.



The stock Chevrolet hydramatic bell housing, torus assembly, flywheel, starter and covers are used to adapt the transmission to 283 or 348 Chevy blocks.



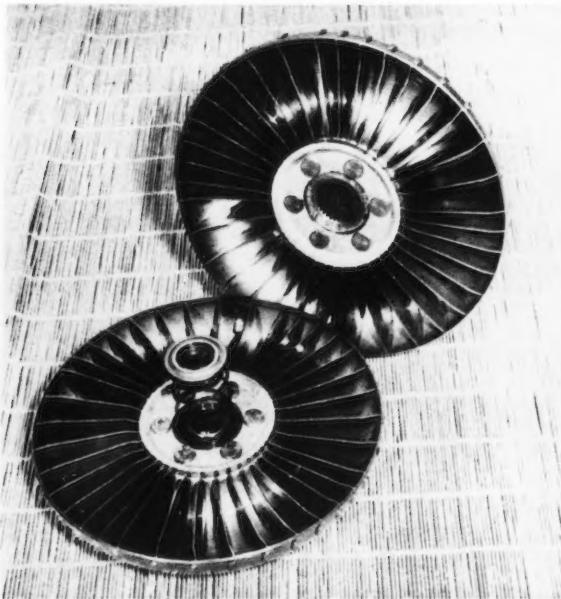
The driveshaft is shortened to proper length by using original Chev drive line for the rear and an Olds on the front, to accept the hydramatic tailshaft. This produces extra heavy duty drive line capable of taking the additional torque of supercharged engines.

center out progressively from 40 to 85 foot pounds. The short block assembly was then decreased and exact timing marks were placed on the vibration damped hub showing T. D. C. and approximately 20 degrees in each direction.

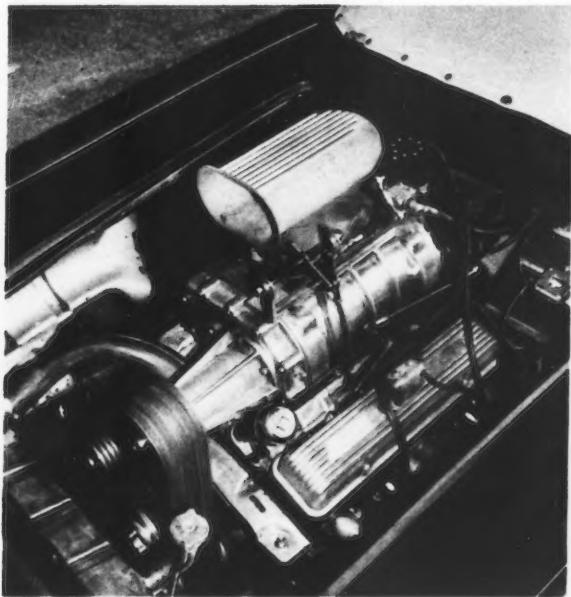
A choice then was to be made on which supercharger kit was to be used. Tom Beatty's V belt kit was selected with a 4:71 GMC Supercharger unit. A ratio of 9.5 to 1 was chosen to prevent a high rate of manifold pressure until after the break-in period and also to give us a

chance to tune the engine in a less critical condition. These are the conditions in which the records at both Pomona and San Fernando drag strip were broken and speeds up to 123 mph plus were turned. The supercharger ratio is now being increased to 1 1/4 to 1 which will raise the manifold boost from 11 to 18 pounds. This, along with the installation of a larger camshaft, is sure to increase the performance factor. A Hilborne fuel injector and Scintilla Vertex magneto assure proper fuel and electrical components for it.

Two 12 volt batteries installed in the trunk allow the engine to start under its own power. This, along with all other recommended safety features make Ed's Corvette a desirable car to drive on the highway. The handling characteristics of the Corvette Super Sport suspension and steering produce a trip down the quarter mile that the driver can fully enjoy. The Candy Apple paint job, offset by the white tonneau cover, makes this machine as pleasing to look at standing still as it is screaming down the strip.



The torus covers are reworked by B&M to allow higher engine rpm in gear without engaging the transmission. This is accomplished by removing a portion of the fins which gives clearance for oil to escape between fins when assembled.



Installed engine shows the Beatty drive mounted on the GMC 4-71 supercharger, Scintilla magneto, and Hilborne fuel injection system. The rocker cover breathers relieve excessive crankcase pressure from the engine's lower end.

Beautiful full pleated Naugahyde interior dresses custom seats, and headliner. Note custom made head rest and chopped wheel. Upholstery by Mangen.



*Sparkling '40 Ford
built by
Cushenberry Custom Shop...*



**STRICTLY FOR
ADVERTISEMENT**



Running boards are frenched, blended into rear fenders. Front and rear fenders are completely changed, and were hand-formed. Scoops enhance car's design. Front and rear windows are one piece. Wheels are chromed, reversed.



To advertise his shop, Bill Cushenberry built this way out custom. The top has been chopped 4½ inches, and body sectioned 5 inches. To further lower the car the frame has been z'd, and the spring eyes reversed. Paint is "Shocked Red" lacquer. Doors, hood, trunk are solenoid operated.

Center right. Hand formed front pan, and grille opening are set off by a chrome mesh covering, and protruding air foil tubing. Lucas headlights are also set in chrome mesh.

Smart Corvette styled trunk blends neatly into rolled rear pan. Taillights are '57 Olds parking lights tunneled, and frenched with red lenses added. Front and rear nerf bars are '50 Pontiac upper bumper rail. Building time 1½ yrs.

Photos by George Barris



from coast to coast

DURING THE WINTER months when outdoor activities came to a standstill in many parts of the country, rod and customs shows take over the limelight. Once again Car Craft has followed the show circuit from coast to coast to take you on a picture tour of some of the many shows visited. Every year a new crop of cars are built, and old ones restyled to try and capture some of the beautiful trophies that are awarded. Most of the cars we photographed are new. Some were winners some were not, but all represented a lot of time, money and work to the owner displaying his car to you—the automotive enthusiast. You will notice many new innovations, styling trends and no doubt pick up a few ideas for your own car or just enjoy the scenery. On these eight pages are just a few of the many fine rods and customs on display from coast to coast.

Photos by Barris, Hegge, Eddy, Sukalac



CALIF.—BAKERSFIELD MOTOR & BOAT SHOW

Dream car which took Andrew DiDia of Detroit 6 1/2 years to build was hand formed of aluminum. Car stands only 48 in. ground to top. Headlights swing down from upper grille.



CALIF.—OAKLAND ROADSTER SHOW

Robert Guadagno, Sacramento has done complete restyling of his '58 Corvette. Features stepped and tunneled headlights plastic covered. Extended front with a tube grille.



CONN.—HARTFORD AUTORAMA

Restyled '57 Plymouth had latest metalflake paint job. Was entered by Bernarndo Auto Body of Milford, Conn. Featured cutaway front fender with recessed lights and swivel seats.

30

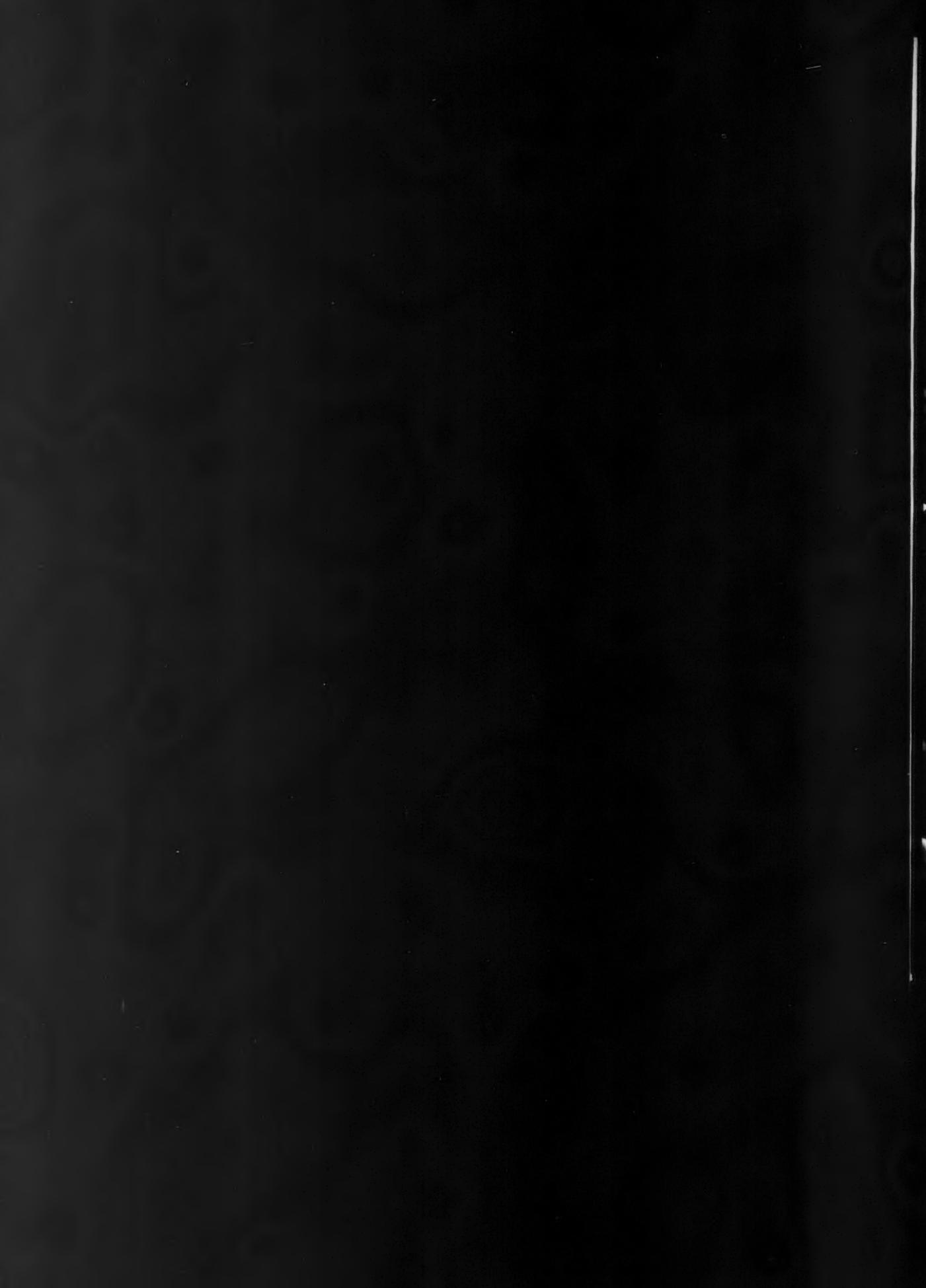


IND.—MID-STATES AUTORAMA, EVANSVILLE

The name is "Red Fever" a '29 Ford roadster built by Frank Pennington of Kansas City, Mo. Wire wheels and chrome set off red paint. The car was built as a family project.

CONTINUED





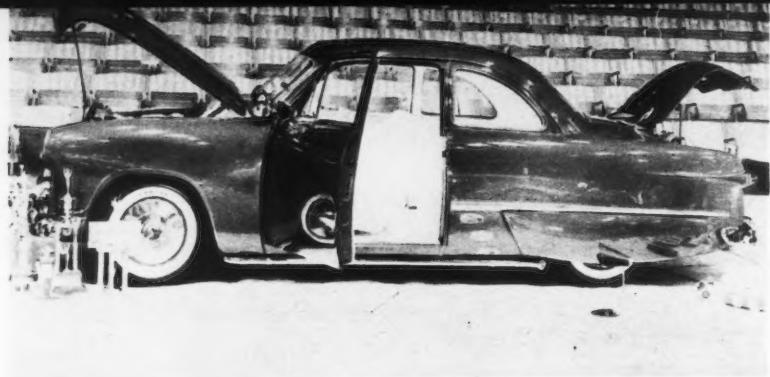
ALL STAR show car roundup



show cars

IND. — MID-STATES AUTORAMA

This trim '49 Ford coupe is owned by Pat Viel, Middletown, Ohio. Car is powered by '56 T-Bird mill. Smooth lines, good workmanship are evident.



WASH. — SEATTLE ROD & CUSTOM

Just finished in time for show was Pat O'Sullivan's '24 Ford. Sported unusual motorcycle dash, chrome moly frame stepped front, rear. Mill is '57 DeSoto.



CALIF. — OAKLAND ROADSTER SHOW

This beautiful '32 Ford competition sedan is owned by Bob Tindel, Portland, Ore. Car is chopped, channeled, has full belly pan. Mill is blown '60 Olds.

CONN. — HARTFORD AUTORAMA

Low '59 El Camino, entered by James Smith of Saxonville, Mass. Novel tail-lights, frenched plate and rolled rear pan protected by nerf bar are featured.



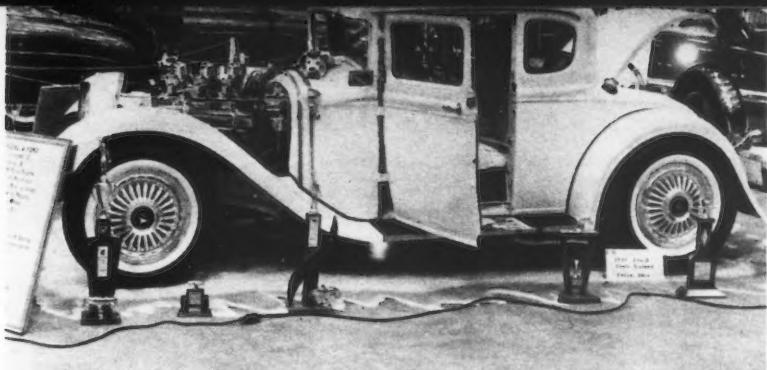
MO. — ST LOUIS AUTORAMA

Fresh front end treatment was given '54 Ford entry by Larry Sorg of Ft. Wayne, Ind. Floating grille bar and Pontiac bumpers and pan used. Neat display.



IND. — MID-STATES AUTORAMA

Radical coupe of Ernie Teaford, Eaton, Ohio, was chopped and channeled. '31 Ford runs a '34 frame and a '55 Chevy mill. Ernie built car for \$800.



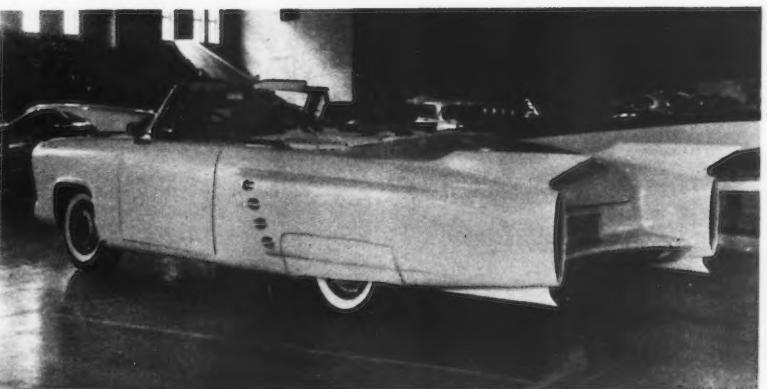
KY. — LOUISVILLE ROD & CUSTOM

Wild scallop paint job makes this '55 Buick really stand out for Wes Gaunce of Cincinnati, Ohio. Car also features much front end work and cool interior.



N. J. — TEANECK ROD & CUSTOM

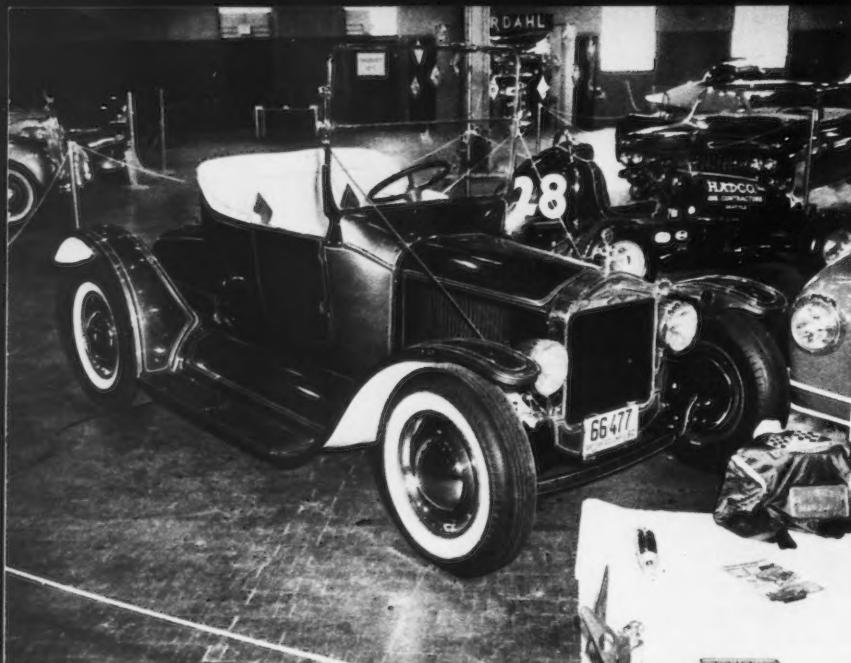
One of the longest cars of the show was this '53 Lincoln conv. entered by Tony Bruskivage. Fenders were well extended front and rear with fins top and bottom.



CALIF. — BAKERSFIELD MOTOR & BOAT

Immaculate '25 T competition roadster was entered by Road Angels of Bakersfield. Car was built as a club project. Features Corvette mill with 6 carbs.





show cars

WASH. — SEATTLE ROD & CUSTOM
This little beauty is a '15 T Ford owned and operated by Chester Sapala of Victoria, B.C. Merc powered car is clean from top to bottom. Driven daily.



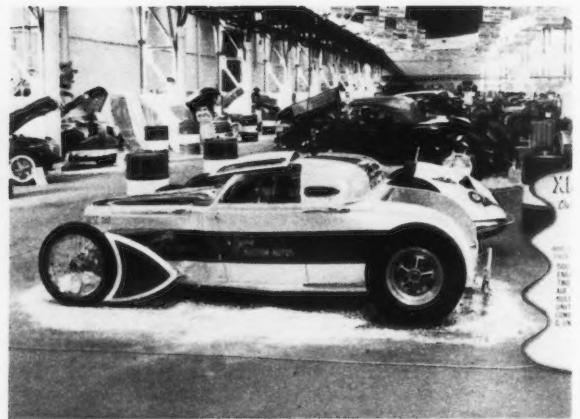
CONN. — HARTFORD AUTORAMA

Clean '59 Corvette, built by Hank Burnstein, of Great Neck, N.Y. Lights are tunneled, hood and fender peaks removed.



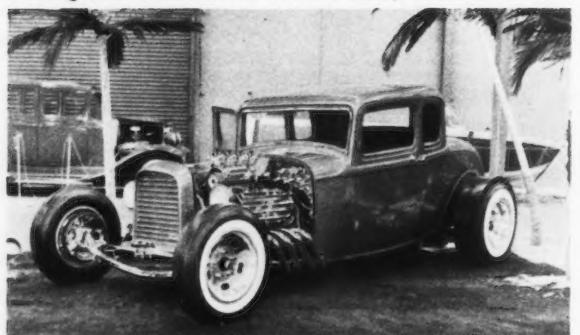
MO. — ST. LOUIS AUTORAMA

Showy '58 Impala entered by Chuck Miller, Columbus, Ohio. Bumper grille combo is '59 DeSoto. Top is chopped 2 inches.



CALIF. — OAKLAND ROADSTER SHOW

Way out competition coupe was built by Barris & Geraghty, Los Angeles. Front formed of aluminum, blown Cad mill.



CALIF. — SACRAMENTO AUTORAMA

Don Tognotti of Sacramento built this '32 Ford five window coupe. It is chopped and channeled, much chrome on mill.



IND. — MID-STATES AUTORAMA

Jet black '34 Plymouth coupe was built by Dale Henberg of Holland, Mich. Car is channeled and runs a '56 Plymouth mill. Bucket seats rolled and pleated.

CALIF. — SAN MATEO ROD & CUSTOM

Wild, well designed '57 Chev belongs to David Pygeorge, Oakland. Front is extended, lights sunk in 8 in., hood is flat. Rear fenders peaked. Cad lights.

CONN. — HARTFORD AUTORAMA

Mr. Blue is its name, a '54 Chev built by Chester Nicewicz of Chelsea, Mass. Features quad taillights set in extended rear fenders. Top is chopped 3 inches.

CALIF. — OAKLAND ROADSTER SHOW

Clean high-boy is the entry of Richard Guasco of Hayward. Body is '31 Ford roadster on '32 rails. Up front is full '57 Chev mill. Rear has quick change.

CALIF. — BAKERSFIELD MOTOR & BOAT

"The Astra" entered by Dick Hoy, Inglewood is handmade of aluminum. Runs tube frame and '52 Olds engine. Low smooth and sleek describe this beauty.



show cars

CALIF.— OAKLAND ROADSTER SHOW
Immaculate is the word that describes this drag coupe entered by Dorricott & Sheehan of Oakland. '58 Fiat body mounted on tube frame runs full Ford.



WASH.— SEATTLE ROD & CUSTOM SHOW
Lower than low, this '49 Meteor belongs to Colin Clark of Victoria, B.C. Body is sectioned 5 in. and lowered 6 in.



KY.— LOUISVILLE ROD & CUSTOM SHOW
This '32 Ford roadster was built up by Bill Sullivan of Louisville, Ky. Rod channeled 8 1/2 in., chopped 3 1/2 in., Chev mill.



MO.— ST. LOUIS AUTORAMA
'29 Ford street roadster is entry of Jack Parrot of St. Louis. Body is channeled 8 inches, runs Olds mill bored to 4 inches.

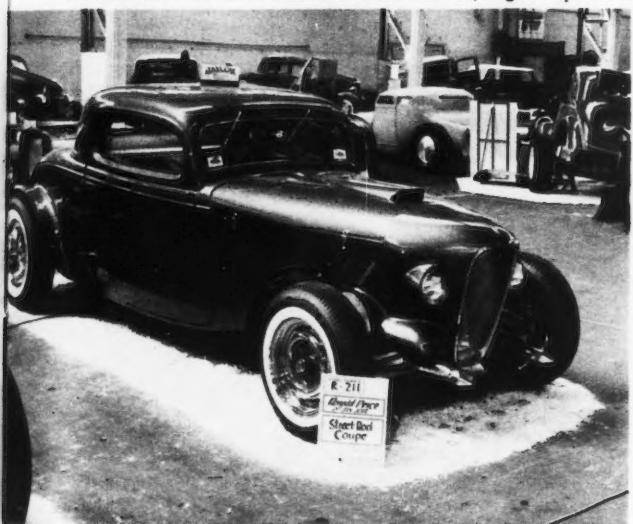


CONN.— HARTFORD AUTORAMA
Well it was a VW, now sports a Victress glass body. Built by Carson Roberson of N.Y. Has Cad taillights, Pontiac bumper.



CALIF.—OAKLAND ROADSTER SHOW

A real gas is this '26 T Ford roadster built by Robert Curtin of Alameda. '59 Chev mill runs GMC blower, Algon injectors.



CALIF.—OAKLAND ROADSTER SHOW

Complete handmade front fenders, hook and nerf bars trim Ron Price's '34 Ford coupe. Undercarriage has full chrome.



KY.—LOUISVILLE ROD & CUSTOM SHOW

Entered in semi-custom class Joe Flower's '56 Chev features landau top, dual side trim, and chrome goodies. 270 hp mill.



CALIF.—SACRAMENTO AUTORAMA

Nicely restyled '59 Chevy Impala is owned by Encil Baker of Oakland. Tunneled quad lites, rolled pan, reworked hood.

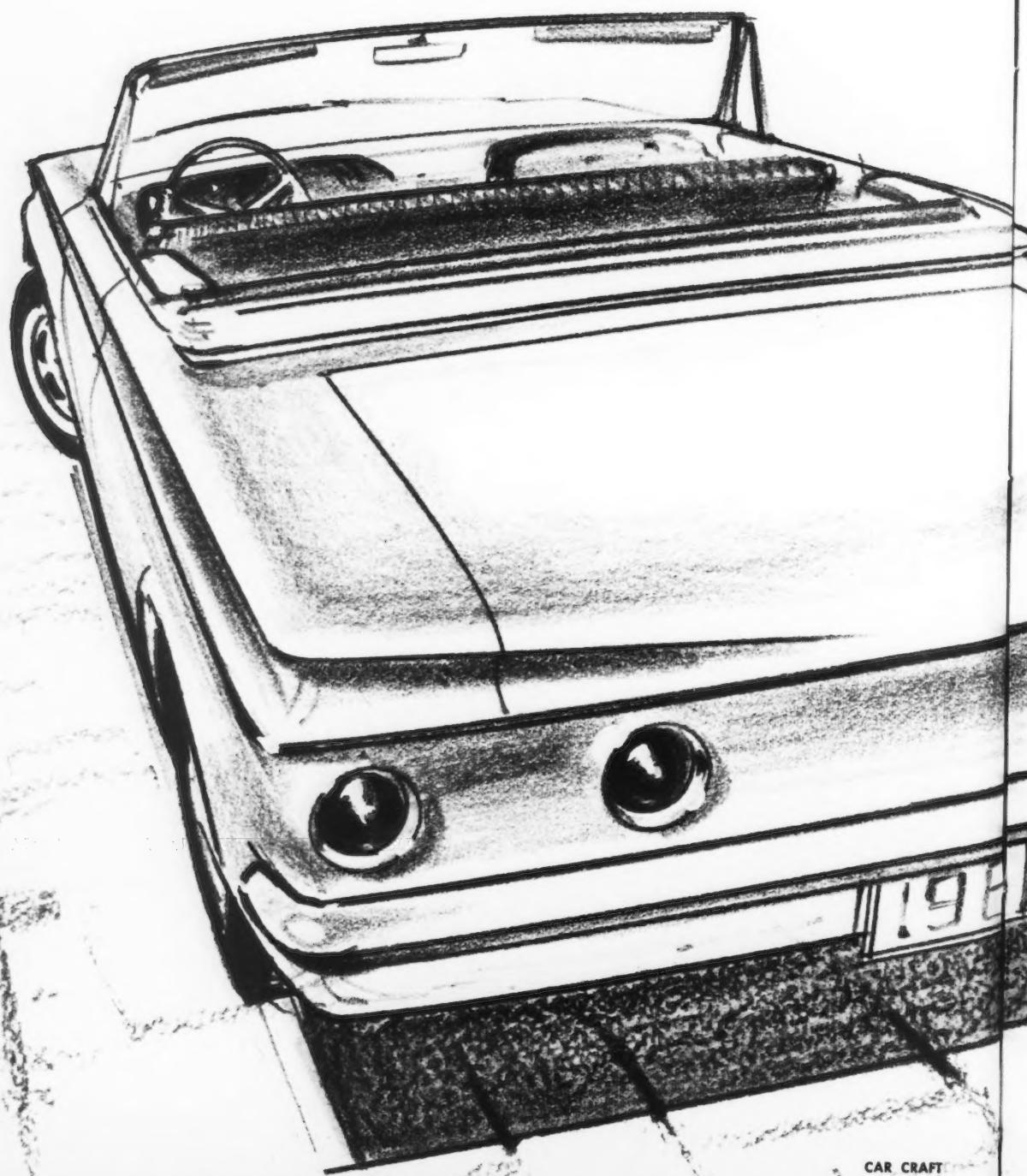


N.J.—TEANECK ROD & CUSTOM

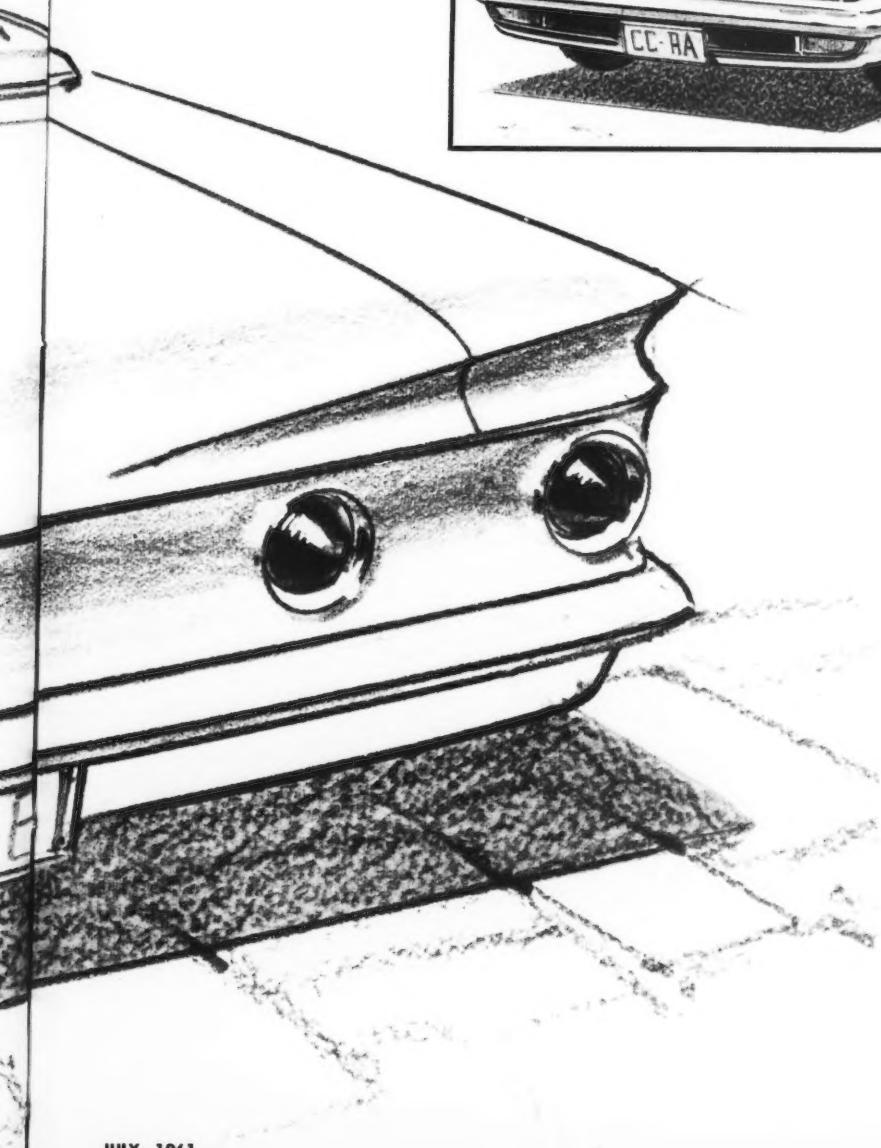
Smart '56 Olds belongs to Fred Frei of Union City, N.J. Top has been chopped 4 1/2 in. and extended using Continental rear window that can be raised and lowered. Car has also been lowered 6".

RESTYLING

THE '61 RAMBLER



G from mild...



A CAR THAT IS seldom customized, but is becoming ever popular in the compact field, moves us to try our hand at restyling the Rambler. The cost of this mild version could be kept well below the \$1000 mark.

In the front end the grille shell is removed, and sheet metal altered and molded to accept '59 Chevy headlight units. A straight bar or a '59 T-Bird grille will easily blend in. Stock lower pan with parking lights, and bumper is retained. Bumper guards are removed front and rear.

The car is lowered two inches in the front. Larger 7:10 x 15 tires are used in the rear for better traction, and to give the car a slight rake.

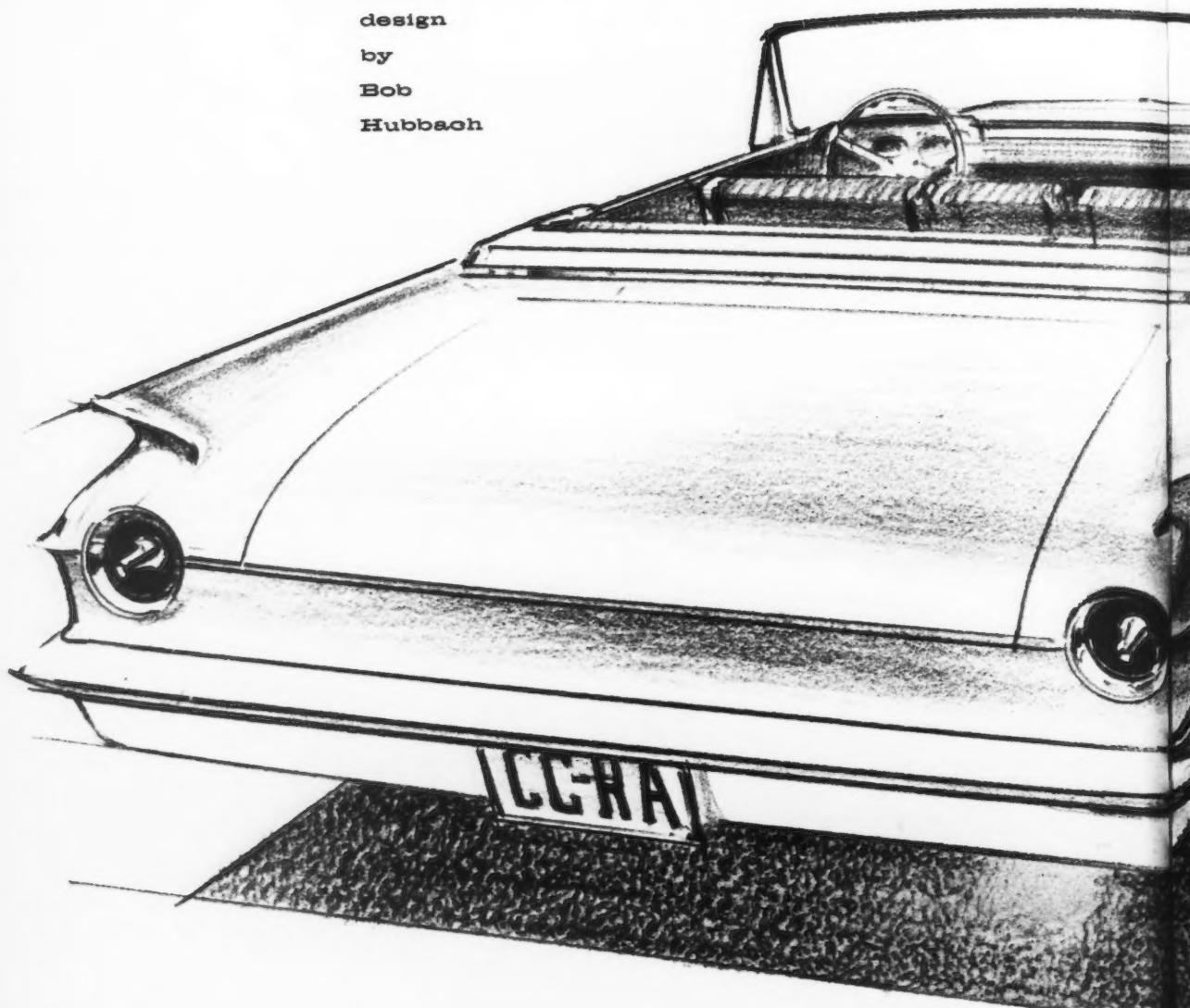
Side trim can be retained or removed depending if the purest theme is desired. Door handles are removed and electric push button solenoids installed. Also remember hubcaps play an important part in the finished appearance of a custom. Follow your theme all the way through. To keep our smooth custom clean, use a plain moon or simple hubcap.

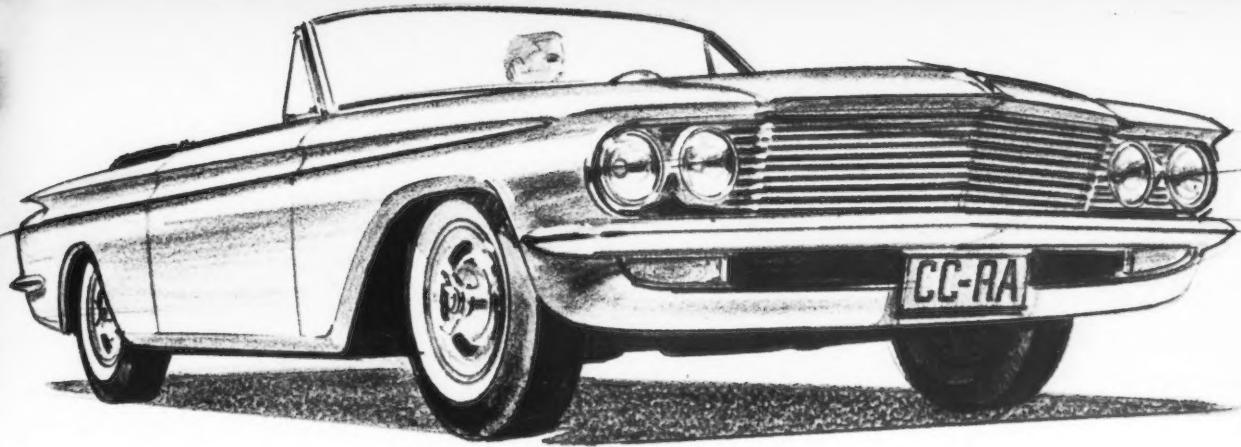
To round off the rear, a mild fin is extended into the trunk sheet metal, and the opening edge of the trunk is moved up to the trim line by filling in seams across the rear pan. Dual taillights are '59 Buick, recessed in slightly extended rings.

RESTYLING...to wild



Illustrations
and
design
by
Bob
Hubbach



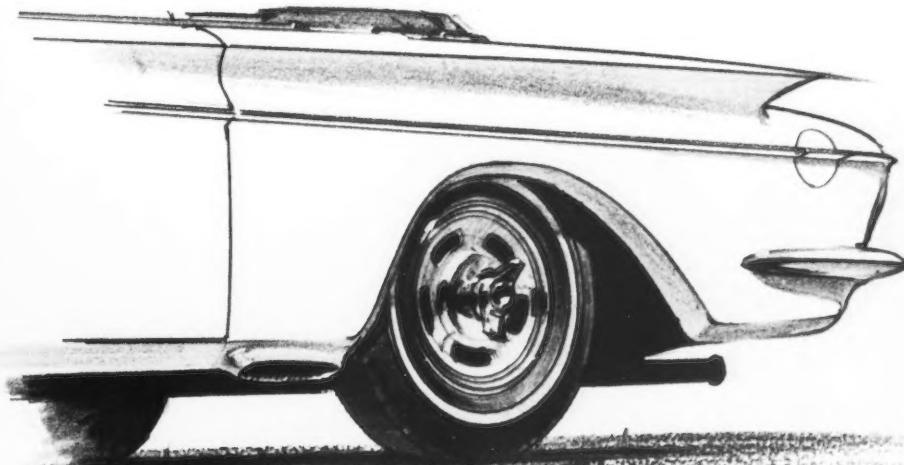


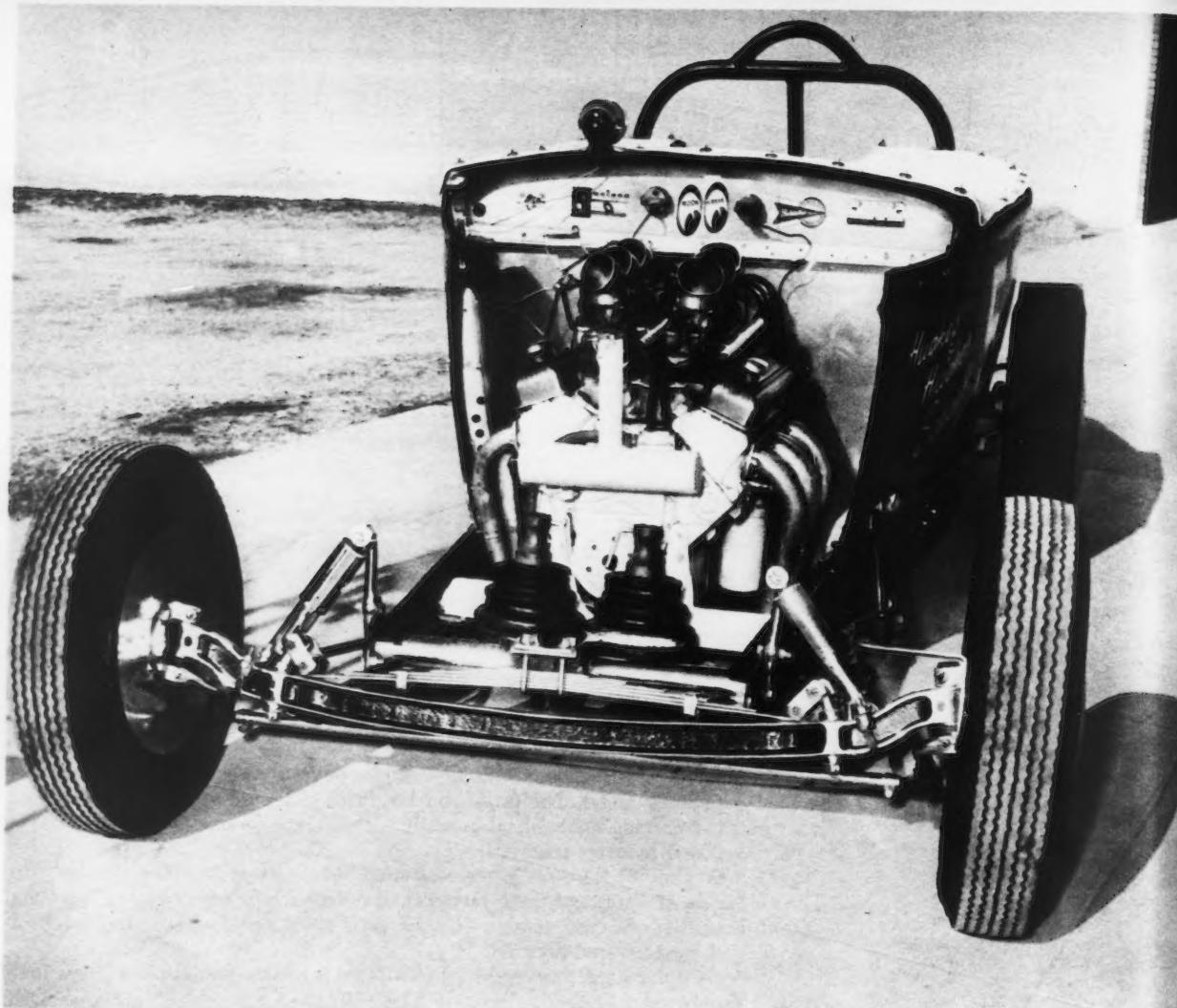
FOR THE WILD version the budget has to go. The reason—the whole unit body is sectioned four inches. This would be one tough job, but necessary to carry out a low sports car type theme. The car is also lowered three inches all around to retain a level position. Sectioning makes a neat arrangement for the gas filler cap to blend into side chrome trim line. Wheel openings are crisply defined by using small diameter round rod and filling. Note the custom molded exhaust ports placed just in front of the rear wheel opening. This is a popular styling trend. Wheels are reversed and chromed with knock off centers added. Door handles are removed, and solenoid operated.

Up front, a peaked hood, and front fender edges from a '61 Dodge Lancer are grafted onto stock metal. The grille and headlight units are also '61 Lancer. Stock front pan and parking lights blend in easily with straight '59 Chevy bumper. Bumper is narrowed and brackets removed.

Taillights are '61 Ford set in recessed rings, which are centered on chrome strip. The centering of lights, gas cap, bumpers, and accessories adds to good taste and smooth lines. Rear fins are made by chopping off sheet metal and reforming tops of rear fenders into lowered deck lid.

A single color light tone paint job is all that is needed to complete this wildest of wild Ramblers.

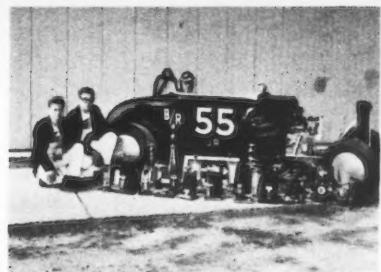
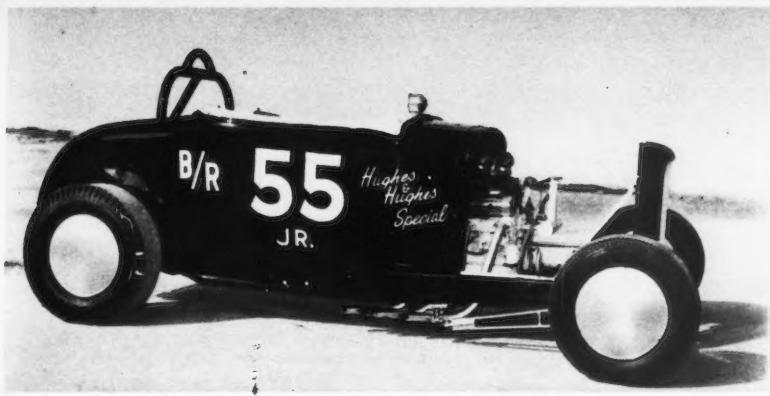




Photos by Ron Taylor

B/R EAUTIFUL OADSTER

...and it's a screamer

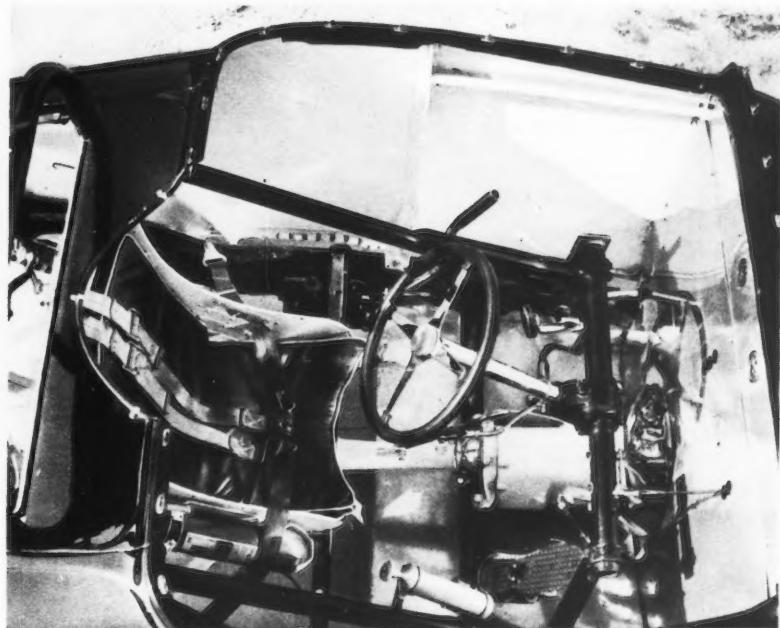


Shown L to R are Ralph Clausen crew-member, Dwight, and driver Don. With a speed of 123:11 and an e.t. of 11:36 you can understand how they collected all the hardware. Some 36 trophies.

Screamin' '31 roadster on '32 rails, was built by Dwight and Don Hughes of Selma, Calif. Engine is set back 25% of the car's 105" wheel base. Traction is supplied by a locked rear and Bruce 670 x 15 slicks. Moon hubcaps are run.

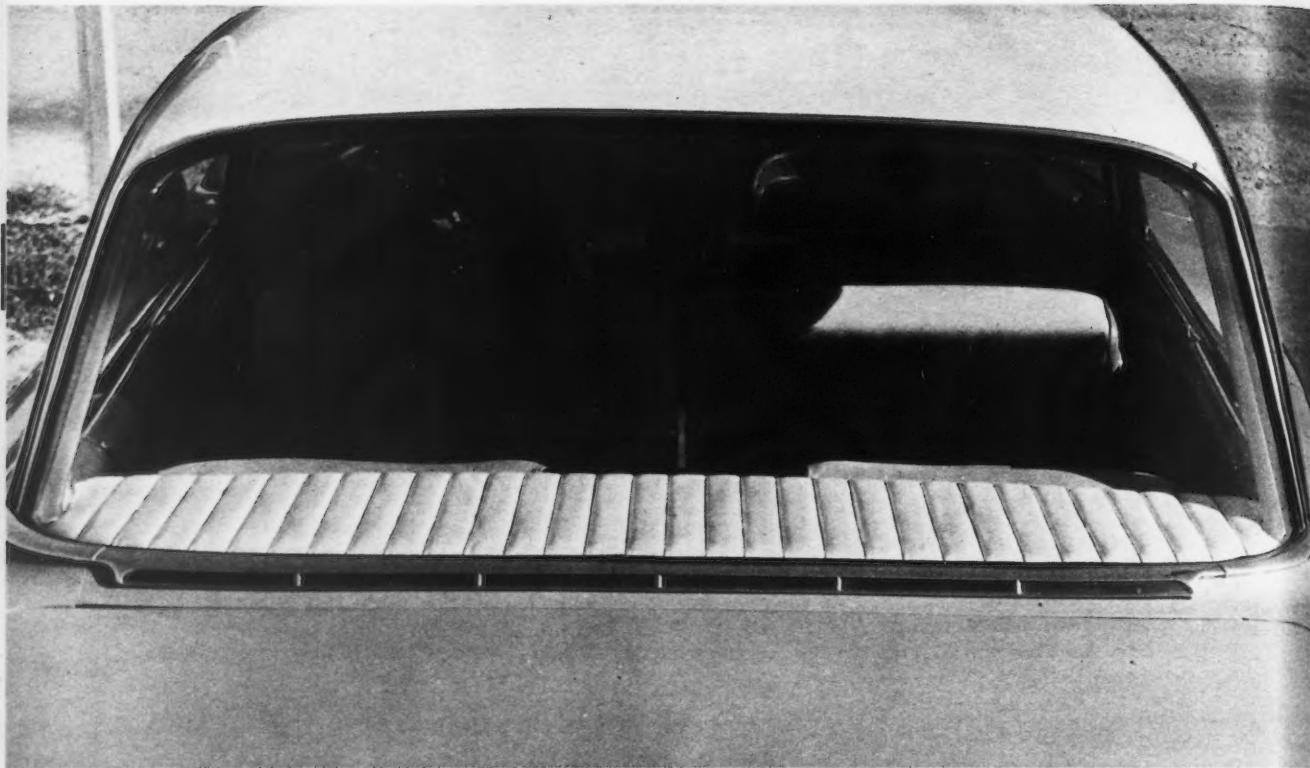
Go-power is via a 301 inch '58 Chev. Running Jahns pistons, a Chet Herbert 280 roller cam, oversized valves, and a Weiand six jug manifold. Carbs are 97's. Heads have the full port and polish treatment with a 12 to 1 ratio.

Trim cockpit includes all necessary safety equipment — a well braced roll bar, seat belt and harness, and an easy to reach fire extinguisher. Steering is a modified Ford. Schiefer clutch and aluminum flywheel, with Caddy trans is used. Rear end ratio is 4:56.



Below, Roadster runs in both B and C classes by adding or removing weights. Old fire extinguisher is used as gas tank. Split radius rods, and chrome front end finish off the Hughes Bros. Special, which has also won for them the best engineered car award at the drags.





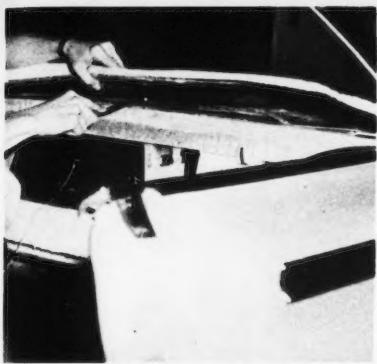
here's
how:

PLEATS FOR PACKAGE TRAYS— THAT ADDED TOUCH

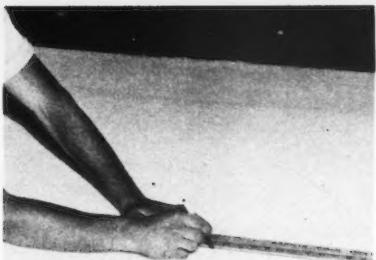
Photos by Hoyt Jeffers, Jr. and Robert Murray

PROBABLY THE MOST overlooked item in custom interiors is the back package tray.

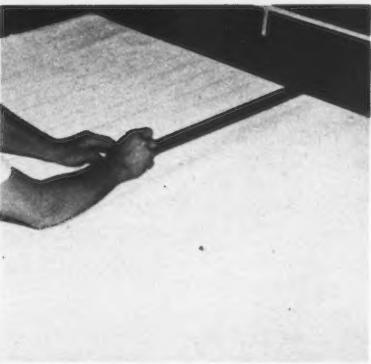
Almost every car, whether it be a rod or custom has some sort of tray or filler between the seat and the rear window. Custom interiors cost between \$100 and \$1000, and yet most forget to follow through with the rolls and pleats on this small item. Making rolls and pleats, especially on straight, hard-backed items such as package trays and door panels, can be done by anyone with patience and a little savvy. All materials needed to cover a package tray should not exceed \$10, and can be completed at home in your spare time, as the tray is not essential to the car's operation. Naugahyde and foam rubber can be purchased in all upholstery shops. This finishing touch can make the difference in looks or winning show trophies. Think back to the last show you were at, or participated in—not many cars had this added touch. So let's get out the needle and thread, and get goin'.



1. First remove rear seat and window molding. Use putty knife remove tray.



2. Next mark off foam rubber in 2 in. pleats, the same size if finishing a job.



3. Naugahyde is then marked same as foam rubber. Large sheet is at a shop.



4. Foam rubber is cut to approximate size, muslin backing is glued to back.



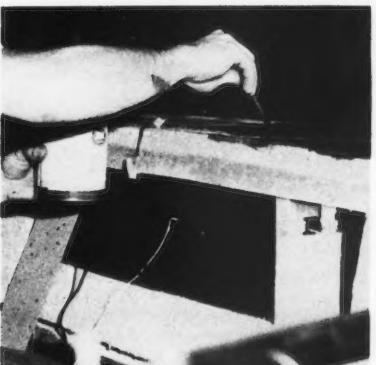
5. After glue has dried, cut foam rubber, muslin to shape of package tray.



6. Naugahyde is sewn over foam rubber forming pocket, making a neat roll.



7. Trim excess material from rear of tray only. Fold over back side, staple.



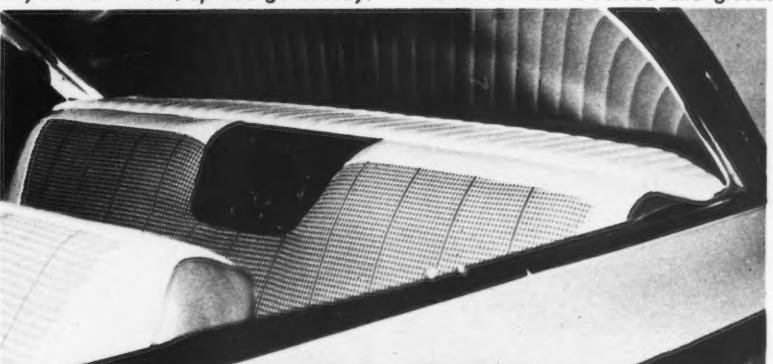
8. Use 3M cement and reglue package tray to rear of car. Spread generously.



9. Package tray is installed, the excess material in front is folded and glued.



10. When glue has set install rear window molding, seat. Looks good already.



11. Whether this is a starting point, or the finish of a custom upholstery job, remember that a job worth doing is worth finishing—with that added touch.



something for the 'birds – rolling the rear pan

here's
how:

ROLLED REAR PANS are as common today as nosing and decking was years ago. This popular custom idea has really caught on, and is one of the best looking ways to finish off any car. It adds that certain smartness, instead of a massive or clumsy bumper. As shown in our step by step procedure it takes very little material, and can be done by anyone with torch know-how. The T-Bird lends itself easily to customizing as can be seen in the finished photos. The rolled pan also adds to the classic lines, as the basic silhouette remains unchanged. The job entails work and time, but the effect is well worth everything involved. So all you cats with 'Birds this is for you . . .

Photos by George Barris



1. If nerf bars are to be used weld in brackets first so as to fix the location.



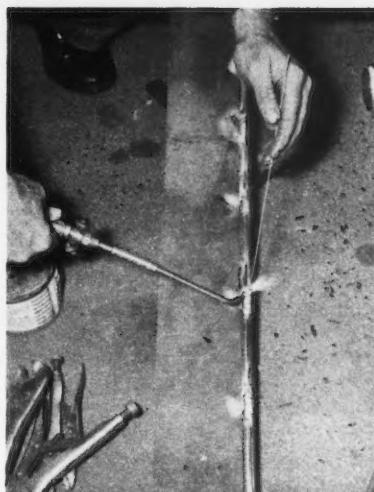
2. Remove the protruding edge of rear panel, must be smooth to butt new pan.



3. Measure and fit a 1/2 inch diameter tubing for bottom edge of rear pan.



4. Cut sheet metal to size of opening, then gradually roll edge over tubing.



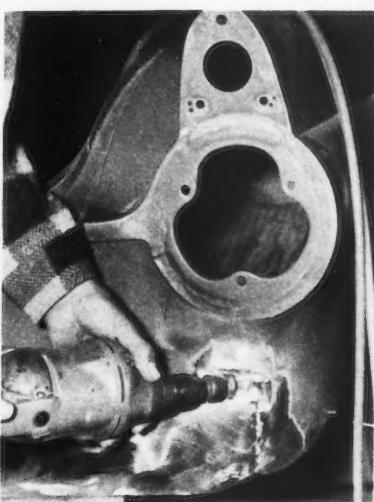
5. After rolling pan edge over tubing braze together at intervals along pan.



6. Begin to shape and fit pan to rear panel. Take time here, good fit a must.



7. When proper fit is obtained grind metal clean, and braze pan in solid.



8. Grind brazed area clean with disc, then use rotary wire brush to clean pits.



9. Use tinning compound to prepare metal. Form lead into area to be filled.



10. A dolly and hammer is used to work out any distortion in pan. Work slowly.



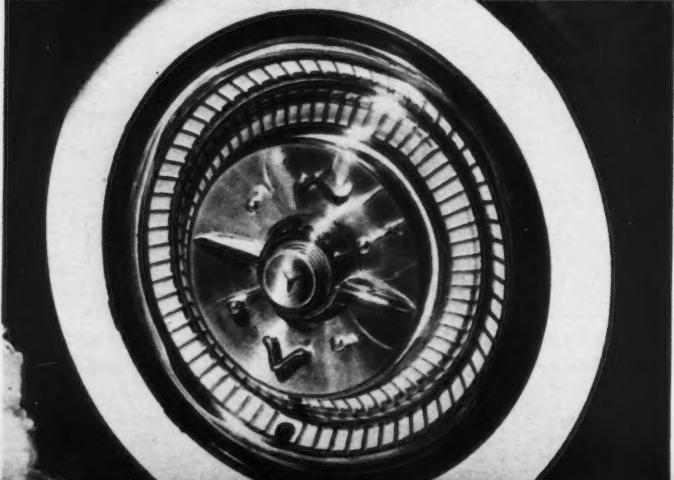
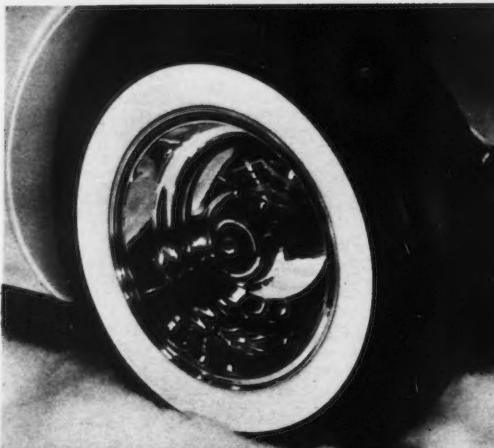
11. Use body file and grinder with #50 disc to smooth and finish off the metal.



12. Metal condition, prime and paint. Finished — something for the 'Birds.

inexpensive hardware
and your imagination
will result in
some classy 'caps

here's
how:



THE WILDEST FAD on customs these days is designing classy hubcaps, something unusual that no one else has. It must look sharp standing still, and be outstanding when turning. To anyone wanting to make their own hubcaps, the design possibilities are unlimited. Even the most fancy caps are inexpensive and require a minimum of tools, such as a pencil, ruler, hammer, center punch, screw driver, and a drill. It actually takes more imagination than work. Top. A very popular idea is the chrome reversed rim. A small cap is used to cover the axle and lugs. This is then dressed up by combining two half round draw pulls with a knob in the center. Above left. A simple cap with just a cabinet pull adorns this chrome rim. Above right. A little more dressy is this one with many small knobs forming a circle. Above. This auto store cap was enhanced by just adding a T pull for a spinner. Last but not least is this '55 Buick cap which has been modified with such items as draw pulls, cabinet pulls and small chrome knobs. Well to each his own—let's see what classy caps you can come up with.

Photos by George Barris



1. Our basis for design is a satin finished aluminum cap. First find center.



2. Center punch all marks before drilling. Use caution so as not to dent.



3. Select drill size according to retaining screw size. Drill center hole.



4. Copper knob and backing plate are centered on cap. Copper adds color.



5. Knob assembly is attached with screw from rear. It's best to plan a design.



6. Four chrome draw pulls are used to set off center knob. Measure in $\frac{1}{2}$ in.



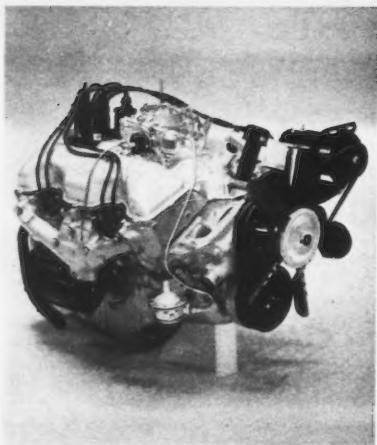
7. Check alignment of pulls, and mark mounting holes carefully. Punch, drill.



8. Attach pulls with screws from rear. Measure 1" down, and mark for knobs.



9. Attach knobs, clean and cap is ready to install. Just hardware—imagination.



CHEVY'S BIG ONE

THE 409

By Roger Huntington

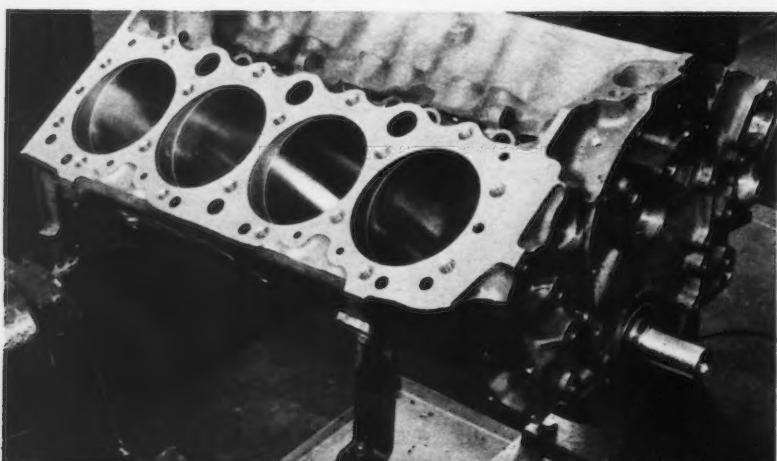
UP UNTIL A YEAR ago the Chevrolet optional high-performance models could take care of themselves in pretty good shape on the drag strips and NASCAR race-tracks. The well-remembered 335-hp Chev ruled the roost in 1959—and when they went to bigger intake valves and ports early in the '60 season things looked pretty good. But Ford and Pontiac and Chrysler weren't standing still. Last year's 360-hp Fords really turned on when the boys learned to set 'em up right. The Chrysler Sonoramie carburetion, when used on the lighter Dodge and Plymouth cars on the 383-cu. in. block, was a wicked combination. And Pontiac's new big-valve heads and dual-outlet tuned exhaust manifolds gave them close to 400 honest horses to work with in Super/Stock. The Chevy boys had their hands full.

Then when the 1961 models were

announced—when Ford jumped up from 352 to 390-cu. in., and Dodge and Plymouth made arrangements to offer the big 413-cu. in. Chrysler block as optional equipment in all models—the Chevrolet engineers knew they'd have to move. The three-year-old 348-cu. in. block was definitely out of date size-wise. The high-performance combinations on the 348 block performed well—but not good enough to beat cars with 50 more cubic inches. The only answer was more displacement. This is the why behind the new 409-cu. in. Chevy high-performance engine. Let's have a look...

The big change on the new engine, of course, is an increase of $3/16$ " on bore and $1/8$ " longer stroke—to raise cubic inches from 348 to 409. The cylinder block is basically the same (except for re-coring for thicker cylinder walls); but the increased dimensions have required considerable changes in crank train parts. Entirely new forged steel connecting rods are used, with $1/8$ " longer center-to-center length and .020" wider crankpin bearings. The new rods look considerably beefier and stronger, and weigh 7 ounces more. The new forged steel crankshaft has all the same main bearing sizes, but the counterweights must be considerably heavier to balance the higher reciprocating weight and longer stroke. Chev engineers said when this engine was designed in the mid-'50s that the lower end and bearing sizes were big enough to handle substantial increases in displacement—and this would seem to confirm that. Counterbalancing has been a problem, though. I see where additional mass has been added on the flywheel flange of the crank, due to inadequate space for that extra rotating mass inside the crankcase. (Olds and Buick had to add counter-weighting on the crank vibration damper when they went bigger in 1957!) Incidentally, the premium Moraine 400 aluminum bearings are continued on the new engine.

Cylinder block for new 409 engine. Note slight taper at the top of the bores to give proper chamber volume and gas flow area around exhaust valves without machined notches that can cause hot spots. Bore is $3/16$ " larger than 348 engine.



The new pistons are forged aluminum, by Thompson. These will be much stronger than the previous cast pistons, and yet sections have been reduced in the head and around the pin boss to keep nearly the same. The new combustion chambers are quite a lot different. For one thing, to hold the same compression ratio of 11.25-to-1 with the 61 cu. in. larger displacement means that the *volume* of the chambers (with piston at top center) must be increased about $1/8$ ths of a cubic inch. On the large Chev V-8, as you know, the combustion chambers are in the

block, with the lower faces of the cylinder heads being flat. Chamber volume must therefore be adjusted by contouring the piston head and/or machining out the top of the cylinder bore. On the 348-cu. in. high-performance engine the bores are machined straight in, with machined notches for exhaust valve clearance and volume control. On the new block the tops of the bores (in the chamber area) are *tapered* in slightly; this gives the extra volume without the sharp machined edges that act as hot spots and invite pre-ignition. Also the piston head is cut back farther, given a little ripple on the contoured section to promote turbulence, and there is a little deeper quench area on the side opposite the plug. All in all it is felt that combustion will be a lot better on the new 409 Chev engine at 11.25-to-1 compression. These engines have long been plagued with pre-ignition and detonation on the street, so that you frequently had to use 106-octane fuel and retard the spark 8 or 10 degrees after carbon build-up of a couple-thousand miles. Let's hope this is a thing of the past now.

As this is written the new Chev 409 engine is only available with a single 4-barrel carb. (Only one carb is allowed in NASCAR Grand National racing, and the first version of the new engine had to be rushed through to have it ready for Daytona in February. But there is no doubt that the triple 2-throat carburetion system will be offered later for the drag strip season.) The current model

uses the same big-port aluminum manifold used on the 348-cu. in. 340-hp engine. The Carter AFB carburetor has $1/16$ " larger primary barrels than the 348 carb ($1\frac{1}{8}$ " primary x $1\frac{11}{16}$ " secondaries). Ignition systems are identical. No vacuum advance is used, and recommended static advance (at idle speed) remains at 12 degrees.

Considerable improvements have been made in the valve gear. The same cylinder heads with 2.07" intake valves and 1.72" exhausts are used. But a new camshaft has increased the intake duration (including ramps) from 316 to 345 degrees, and exhaust duration from 290 to 294 degrees. Valve lift is boosted from .410" to .440. Pushrods are much beefier, and valve springs have been switched from duals to one big, hefty spring, with larger, heavier retainer and cap. The previous dual-spring setup would give a total pressure of about 215 lbs. with the valves in the open position. The new single spring gives about 280 lbs. with valve open. The larger single spring should stand for gaff without breaking or losing tension—and apparently spring surge (the usual reason for using dual springs) is not a problem at the maximum expected crank speeds of 6500 rpm.

Add a beefier flywheel with about 20% more clutch spring pressure to hold the extra torque—and you've got the essential differences between the new 409 Chev engine and the previous 348-cu. in. job from which it was derived (and which is still

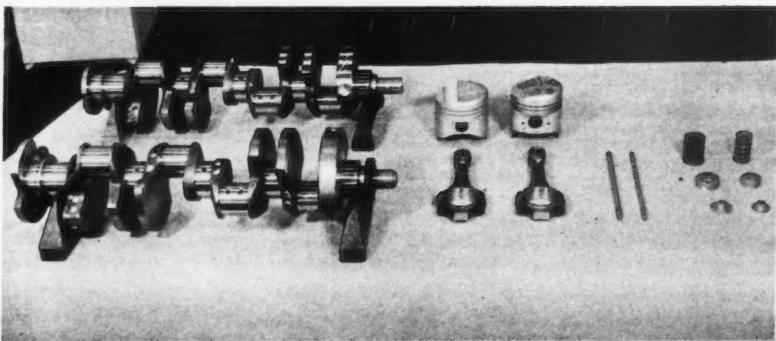
very much in production, of course).

Chevrolet engineers have *under-rated* their new 409 engine on both horsepower and torque. They advertise the HP at 360 at 5800 rpm, with a maximum torque of 309 lbs.-ft. at 3600. This is only 20 more HP and 47 lbs.-ft. more torque than they give the 348-cu. in. engine with single 4-barrel carb. I have it on good authority out of the Chev dyno rooms that a good 409 that's properly tuned and set up will show 375 hp at 5600 rpm, with peak torques going up as high as 430 lbs.-ft. at 3400-3600 rpm! Early versions have already touched 105 mph on the drag strip, with e.t.'s around 13.6-13.7. There must be *some* HP and torque here!

But there may be method in this madness. Drag strip enthusiasts (more than one of them) have been trying to din it into auto company engineers for years that our stock cars are classified on a basis of *advertised* horsepower and shipping weight. Cars that are advertised at some fantastic figure, 'way above what they can actually put out with normal tuning, are at a great disadvantage in the stock classes. The drag strip boys have been telling Detroit that the best way they can improve the chances of their products in stock competition is to rate the engines *conservatively*. Since most of the potential customers for these special engines know enough about cars not to pay any attention to the ratings anyway (!), what is there to lose?

Apparently the boys are getting through to Chevrolet at least. They could just as well have called this engine 390 or 400 hp. But note that the new 1961 NHRA stock classes put the division between Super/Stock and A/Stock now at 10.60 lbs./hp, instead of 12.60 as last year. This means the '61 Chevy station wagons with the new 360-hp 409 engine can run in A/Stock. If they had rated the engine at 390 or 400 hp all the '61s would've been in S/S. I'm sure this is a major reason for the conservative rating on the new engine... though no one around Chevy will admit it. Let's just hope they don't go off the deep end when they rate the up-coming triple-carb version—like Ford did with the 401 hp on their new "tri-power" 390-cu. in. job!

All in all the new 409 Chev looks like a real promising combination for the 1961 drag season from this corner.

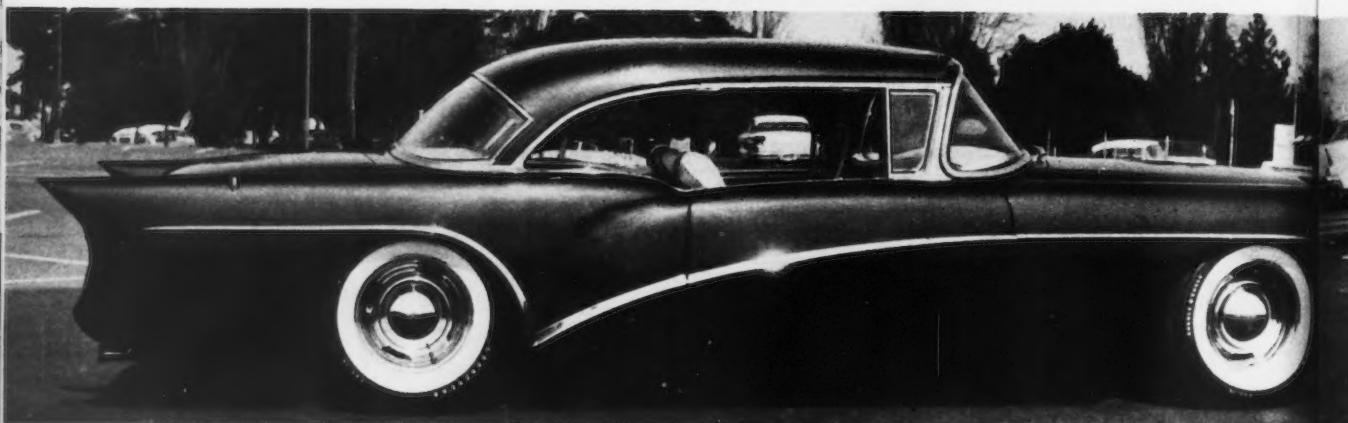


A comparison of major internal parts for 348 and 409 cu. in. engine shows the big engine has much beefier internals, to take extra torque. The new forged steel crank has $1/4$ " longer stroke, and heavier counterweights, also note extra weight on flywheel flange. Forged steel con rod for 409 (right) is $1/8$ inch longer and weighs 7 oz. more than 348 rod on left. Bearing surface is .020 wider. Pistons for the 409 (right) are forged aluminum. Has shorter skirts, and crown is rippled to increase turbulence for smooth combustion. Push rod is larger, as is heavy spring.

JULY, 1961

This sharp '56 Buick was given the full treatment by Lore Sharp of Bremerton, Wash., and his father who is a mechanic. Fully rounded hood blends well with frenched grille, rolled pan. Canted lights are '58 Chevy. Tube grille.

At first glance car does not appear to be sectioned due to the use of stock side trim. Actually 4 inches were removed from side. Color Candy Apple Red. Chrome reversed rims used.



Sweet And Sectioned





Above. Lore gives credit for helping with work to Gil Clifford, Bremerton, Wash. He also estimates that it cost him \$7500 to customize car, and with all the eye appeal it has it seems to be well worth the time and money.

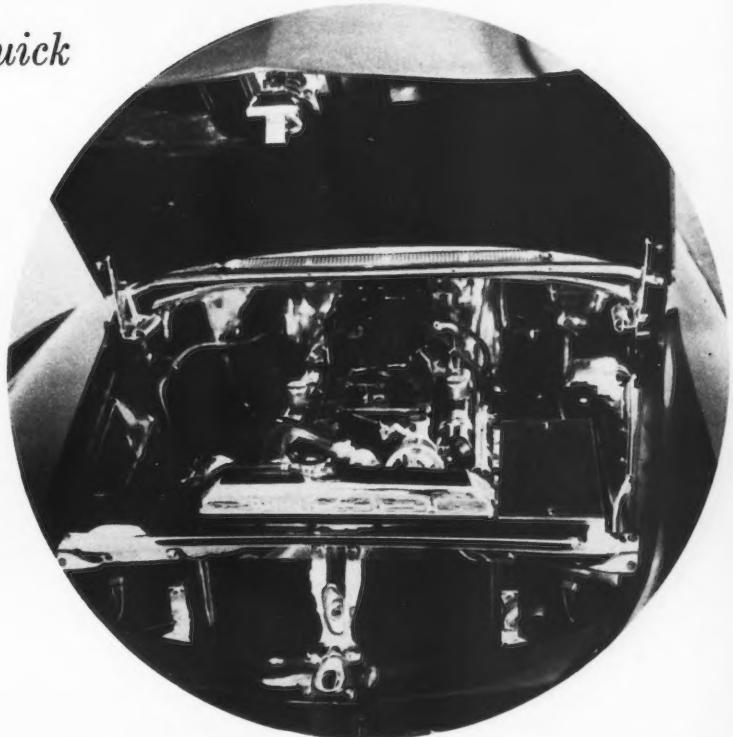
Interior was very richly done by Rivas, of Bremerton, Wash., in gold and white Naugahyde. Deep fluffy rug is strictly from plushville. Dash also features much chrome, padded pleats.



Lore Sharp's all-the-way Buick

Engine compartment features sparkling goodies, with big Buick bored to 4 1/8 inches using Jahns pistons, Perfect Circle rings. Also run is Isky cam and kit topped off with a Hilborn fuel injector. Ignition is Mallory. Trans is modified Dynaflow.

Left. Rear tube grille is carried through from front end styling. Rolled lip and custom plate frame is featured. Fenders extended to house twin Packard taillights with bottom corners rounded. Due to sectioning, rear window had to be relocated in order to operate. Electric aerial recessed in rear fender.

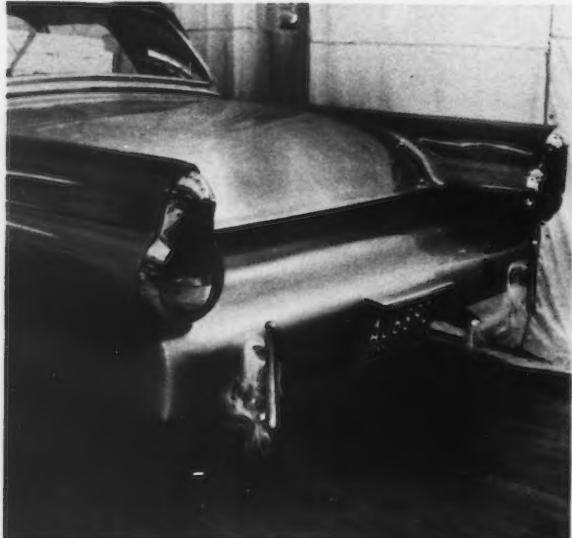


Photos by Frank Faraone

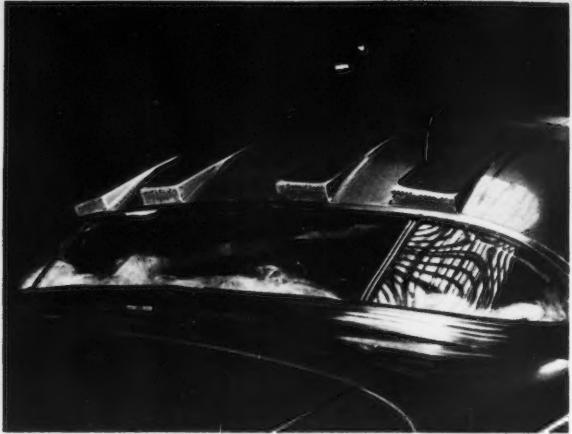
TRICKS OF THE TRADE



Dual lights of all kinds are being used very widely. Some are simple to install. These '55 Chrysler taillights were frenched nicely into rear of '54 Ford. Note license frame.



A T-Bird is a natural to customize. Rear bumper was removed and exhaust outlets rerouted. A new rear pan was rolled with built in license frame. Merc station wagon lights bolt on.



The use of all types of scoops has become one of the most popular ideas in customizing today. Shown here are four individual scoops with mesh grille to enhance roof line.

SOME CUSTOM IDEAS FOR TOPPING UP ON THOSE HARD-TO-GET SHOW POINTS

Photos by Higgins, Eddy, Hegge



Where to install the aerial has long been a problem for customizers. Here is one idea that is very neat, a frenched tunnel in the side of the fender. Do not pass too close.



A new idea that has just come along is working in the old side view mirror. This installation has been well molded in and peaked. You will be seeing more and more in design.



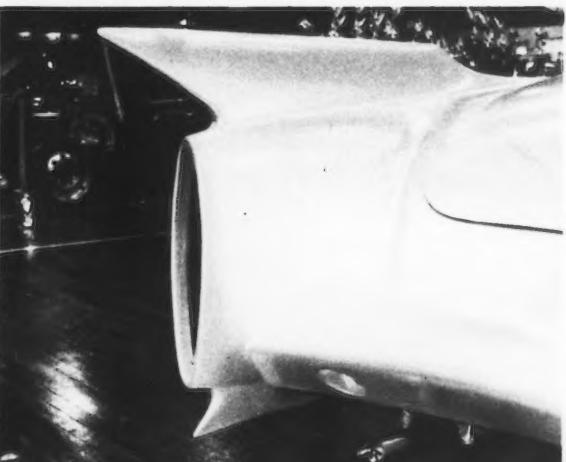
Carrying rearward front end styling is also very popular. The use of a rear grille balances a car's design. This one has been extended with a rolled under pan. Recessed plate.



Rear fender scoops have long been popular and are still used. This one runs from bottom of car to blend with roof line. Chrome moldings have been extended, give long look.



This front end features many custom trends, such as peaked front fenders, and dual canted headlights. Also used is a rolled front pan, bullet bumpers, and hardware knob grille.



Long extended rear fenders with top and bottom fin are used on this '54 Lincoln. Lens is set deep in fender extension. Rear pan has also been extended and rolled, note back light.



This '59 Chevy has its cat eyed taillights frenched and recessed with flat red plastic for lenses. Rear pan also features a smooth clean appearance with a rolled bottom.



QUARTER MIDGETS PUT ON A TOP SHOW AT THEIR SPRINGTIME LAS VEGAS MEET

GRAND NATIONAL



UNFAVORABLE WEATHER conditions played havoc with the Quarter Midget group at the Grand National Invitational meet in Las Vegas this past Easter week at the famed Hacienda Hotel oval. Wind and sand combined to hold down speeds, allowing only a few records to be broken. The 9th Region of the QMA officiated at the races, sponsored again by the Quarter Midgets of America, under the helm of John DuPree. Gary Able, 16 year old ex-QM pilot, did a very commendable job as starter in this, his first National event.

Solt Engines and the Hacienda Hotel were major contributors of the handsome trophies presented, which are always looked upon before the races by wide-eyed youngsters just hoping to take one or two home. Eddie Losinski turned in a fast time of 6.80 seconds, slower than last year, to take the pole position in the AA Fuel event. Last year's champ, John Kuramoto held third spot. These boys held opposite positions last year, both giving a good showing as usual. Eddie took the 40 lap fuel event with John placing a close second.

Head of the tech committee was Ted Weaver, who did a splendid job at the engine teardown bench. The toughest part of this job is when the time comes to inform a dad that his engine is illegal, often after his son or daughter fights hard to win a race. This is a hard one to explain but it happens everywhere, everyday.

Young Chuck Perito came from Denver, Colorado with his Shoji powered QM, set fast time in Jr. Mod. Stock class, then had engine trouble during the main event while leading the pack. He wasn't the only one to experience bad luck but in all, the races went off smoothly, the kids putting on a good show. Most of the QM'ers can't wait until the winter Race of Champions rolls around, no wind or desert sand to face, just crisp, cool air and another chance at a record.

Report and photos by Bud Lang





Bobbie Tripp, 9 year old Costa Mesa lad, prepares to pass Alan Honore during running Sr. B event at Las Vegas Hacienda oval. Tripp has class fast time of 7.03 seconds, took Sr. B event. Bill Paske charges down pit straight in this worms eye view at left. Quarter midget drivers put on a very outstanding show.



Charles, Helen, and Chuck Jr. came from Denver, Colo., to have their share of good and bad luck. Chuck set Jr. Mod. fast time of 7.63, then blew mill.



The blondes from China Lake, Calif., Butch and Barbee Gallaher set fast times in Sr. Stock, Jr. Stock. Barbee, 7, took 2nd in main, Butch, 2nd in B. Semi.



Fast Timer and AA champ was Eddie Losinski, Downey, Calif. Eddie lapped all but 2 cars in grueling 40 lap main event, was one of youngest pilots.



Awake long enough to qualify as fastest Jr. B driver, Sleepy Tripp, 7, Costa Mesa, turned the Hacienda oval in 7.03. Shown above leading the pack, Sleepy went on to win main event. His car is similar to brother Bob who won Sr. B. Main.

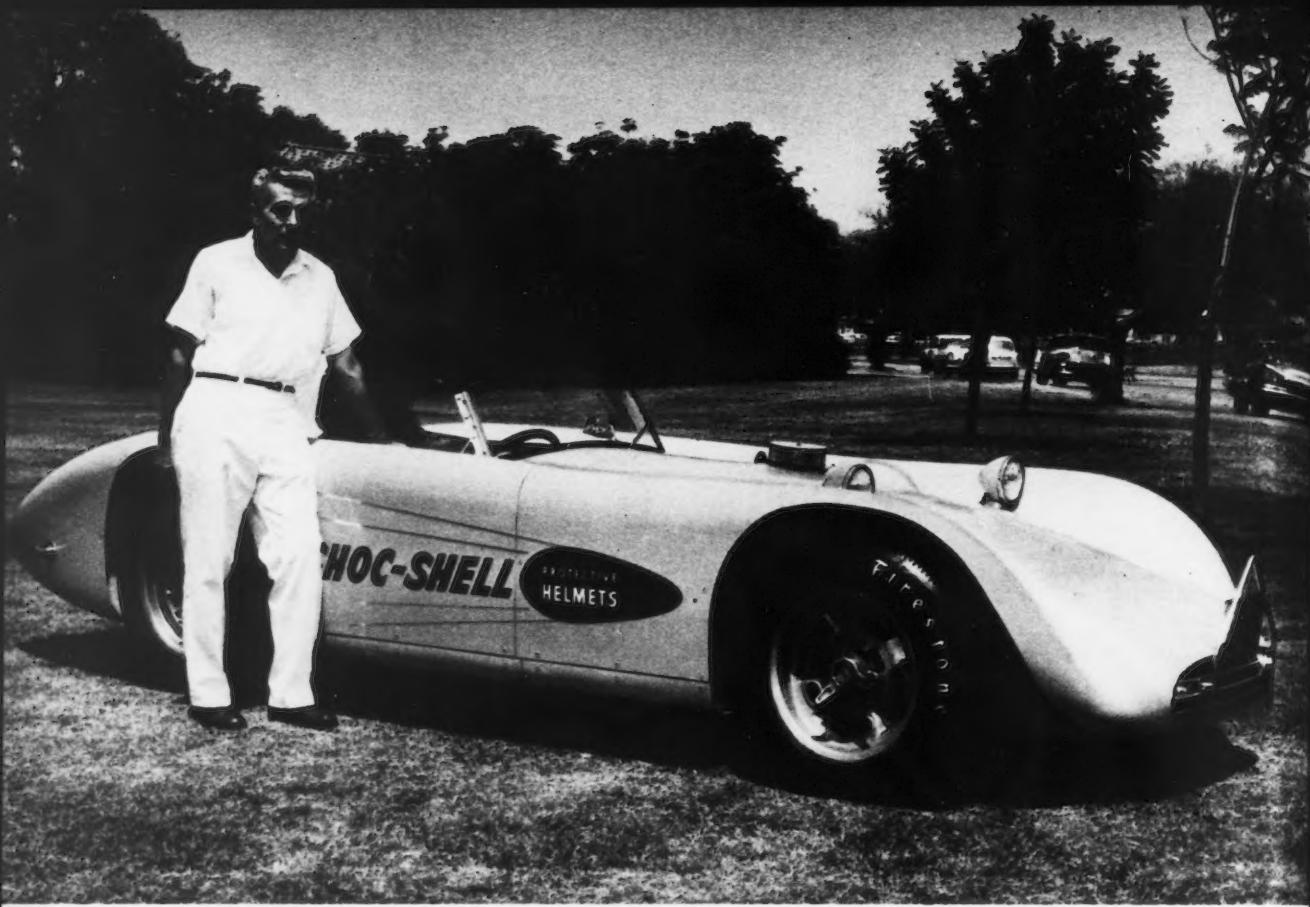


Starter gives the sign to close the gap before starting the Jr. Mod. QM's on way for 35 lap main event. Chuck Perito of Denver had pole position, led race to halfway point with his Shoji powered car, then dropped out due to rod troubles.

INVITATIONAL

Right. Taking the long way around, Eddie Losinski passes Lonnie Caruthers and Billy Felts in rapid AA Fuel Main event. Fortunately the weather conditions improved for the Sunday race runoffs, a pleasant relief from the desert sand present earlier. At left are some of the AA Fuel contenders caught unawares in their quarter midgets shortly before race time. Each boy contemplates the race before him, will it be his?

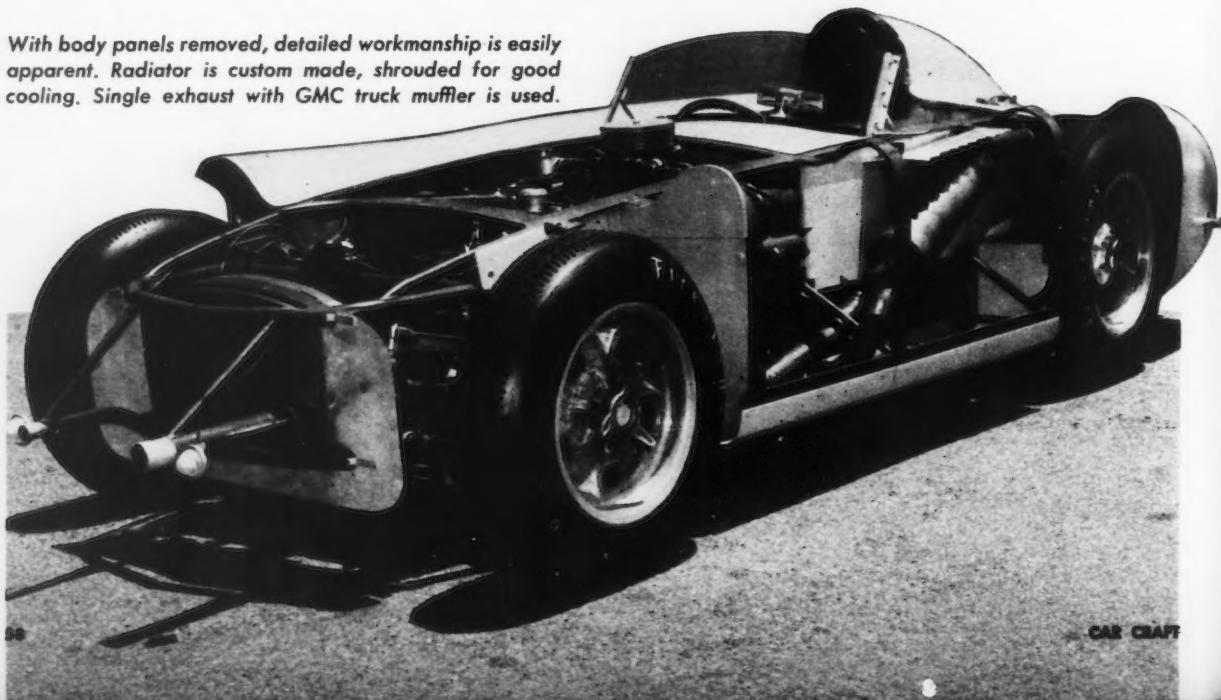




John Lohrenz of Long Beach, Calif., used Kurtis frame as a nucleus for his custom bodied sports car. Painted a lemon yellow, with black leather upholstery, car is also used to advertise Shoc-Shell crash helmets which John manufactures.

INDY STREET MACHINE

With body panels removed, detailed workmanship is easily apparent. Radiator is custom made, shrouded for good cooling. Single exhaust with GMC truck muffler is used.

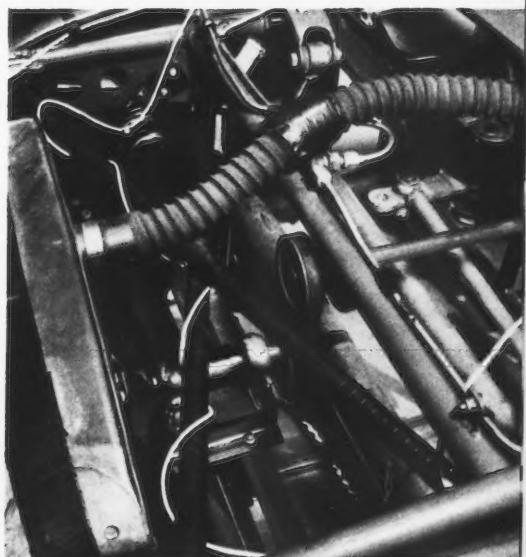
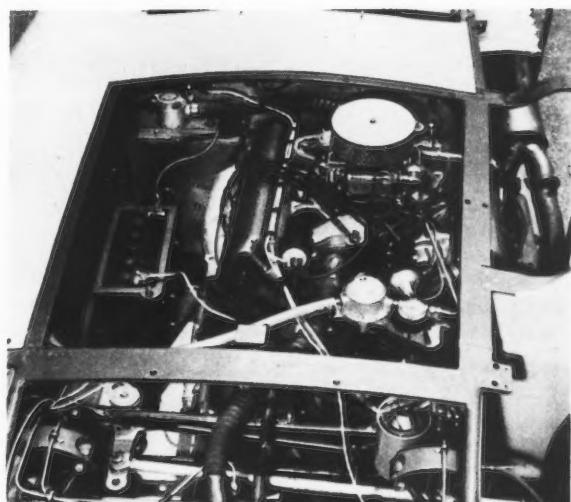
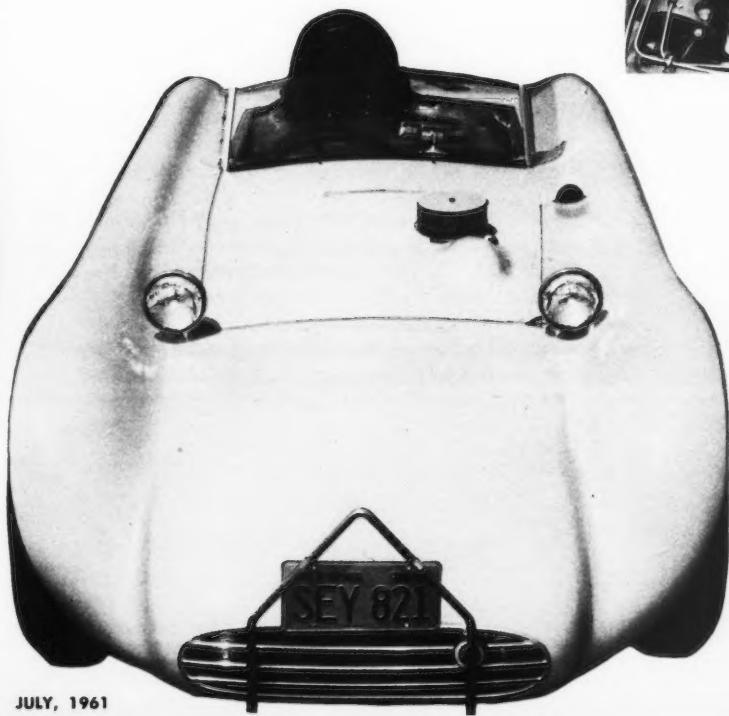




Even though car is used as a street machine, Indy lines are evident, even to the quick fill gas cap. Car has a 98 inch wheel base. Halibrand knock-off mag wheels and Firestone Monza tires are run. Rear end is Halibrand quick change.

Right. Power is via a 430 cu. inch '58 Lincoln engine which is mounted solid to a $\frac{3}{8}$ " aluminum fire wall. Engine and '58 Ford transmission is offset in Indy style. Shocks are Monroe. Brakes are Goodyear discs. Bottom right. One of the best offset fan arrangements we have seen was built by John. The main shaft is driven by a special idler pulley off the engine, which in turn drives the lower shaft and fan unit. Shafts are supported by self aligning bearings.

Bottom. With engine offset so far to left, a special clutch arm was made to operate from the right side of the bell housing. Air scoop on left side of car is to cool muffler compartment. Parking lights are set inside tubular grille.



A VERY RARE BIRD

*Radical metal sculpturing has turned
Jim Gimenez's Thunderbird
into a one-of-a-kind
creation*



Jim Gimenez of Hayward, Calif., has restyled this '56 T-Bird into a new creation. Proof that this is an outstanding job, Jim recently won a 10 ft. trophy for the most beautiful car in the Monterey Motorama. Color is Tahitian pearl green.



Photos by Frank Faraone

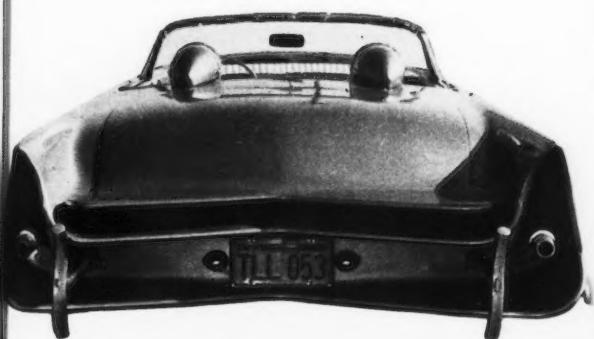
Interior is very plush, features custom bucket seats, double head rests, and center console covered in pearl silver Naugahyde and matching Frieze as is custom dash. Rug is also pearl silver 1-inch thick. Much chrome is used to compliment color. Interior is by Sahagon's of Hayward, Calif.

Completely reworked front end features floating tube grille. Frenched lights are '58 Edsel. Bumper has built in license frame, parking lights set in tips. An extremely difficult job was chopping the curved windshield 3 1/2 inches. Credit for body work: Joe Ortiz Custom Shop, Hayward.





To lower car, body was sectioned 2 1/2 inches, and front A frames sectioned and fitted with '58 Ford Ranchero springs, rear end has 6 inch lowering blocks. Doors are operated by Lincoln push button. Chromed reversed wheels, special caps.



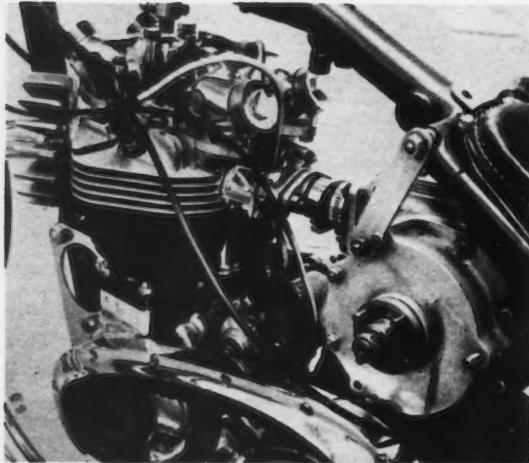
Extensive customizing of rear includes extended fenders, tunneled rear pan, and taillights, and doubled lip trunk. Lights are '59 Merc frenched. Custom nerf bars protect the work. Jim estimates that he has invested \$10,000 in car. Trunk is also upholstered in matching scheme.

Engine compartment has not been forgotten, is fully painted even to finishing underside of hood. Engine is 300 hp '59 Merc with full chrome treatment. From front to rear car is finished in detail and is a very rare bird.



Cannibal

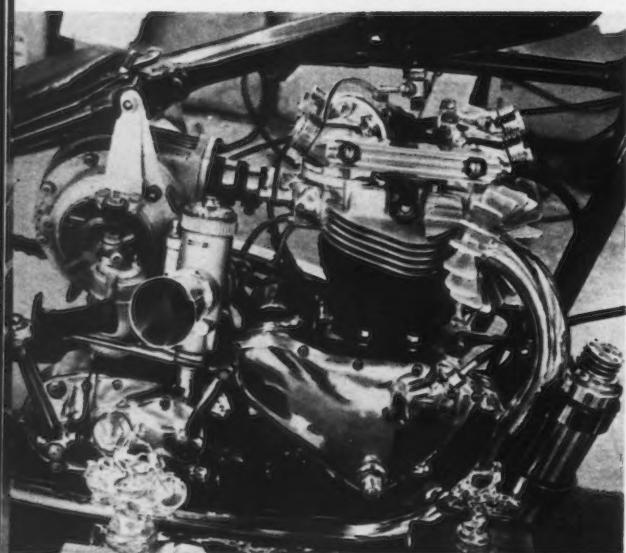
Blown Triumph eats up the trophies at drags and shows



Main feature of the bike is Shorrock blower, made in England. Frame has been lengthened, tube removed to accommodate blower. Rated hp is 70 at 7200 rpm.

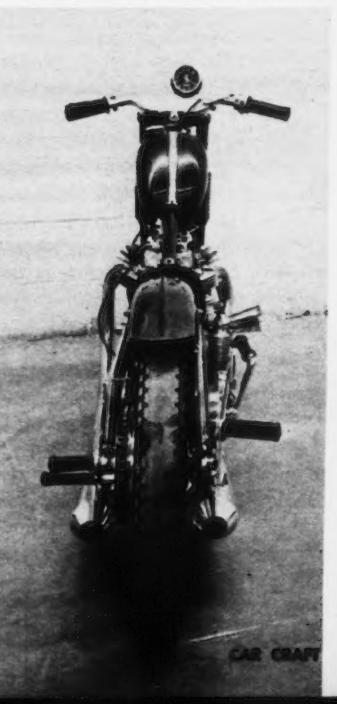


Don Esper of Detroit, Mich., built this drag bike that has won him 16 drag and 3 show trophies in one season. Time without blower 11:98 et. 111:45 mph. Front forks are chopped 3 inches.

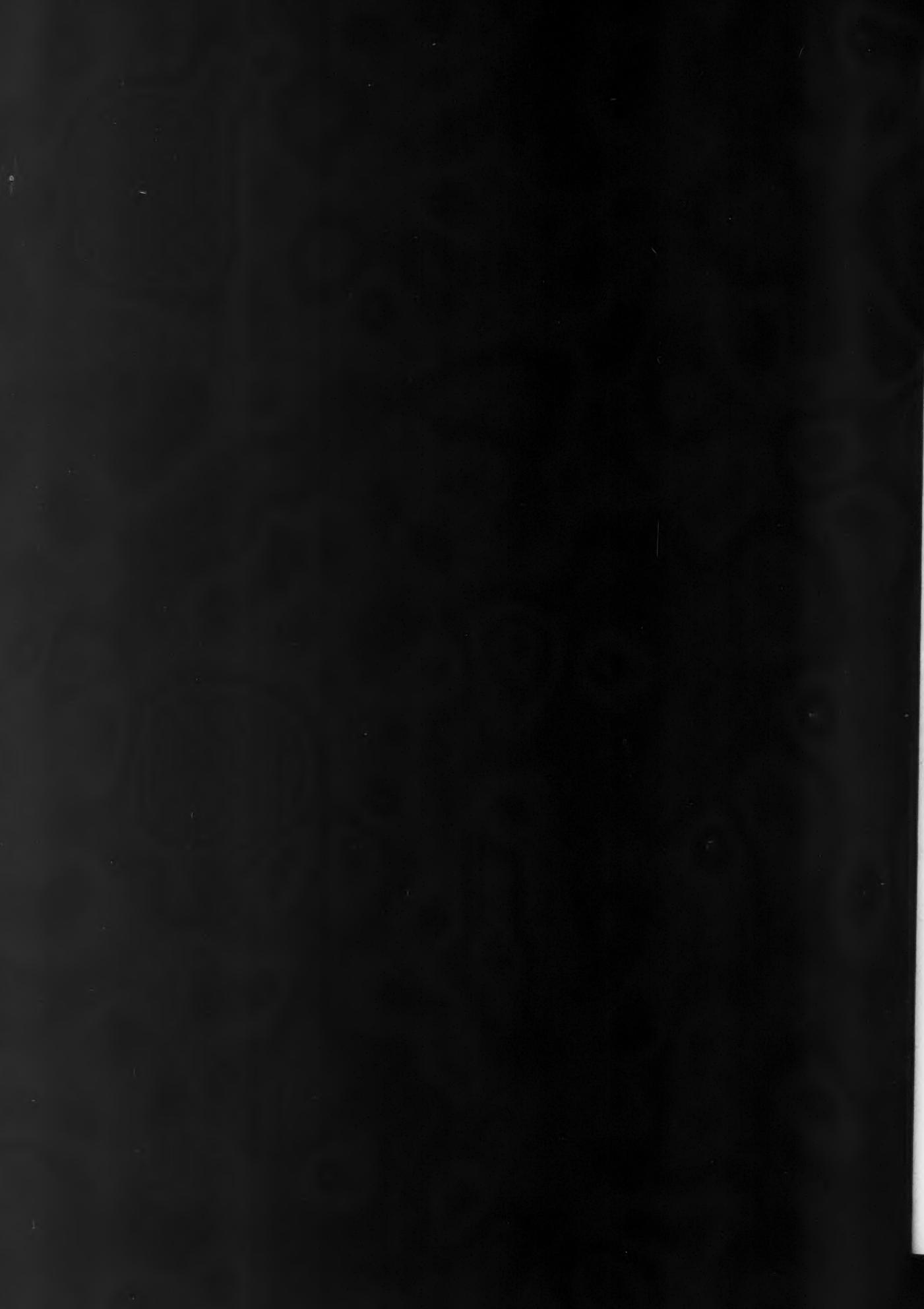


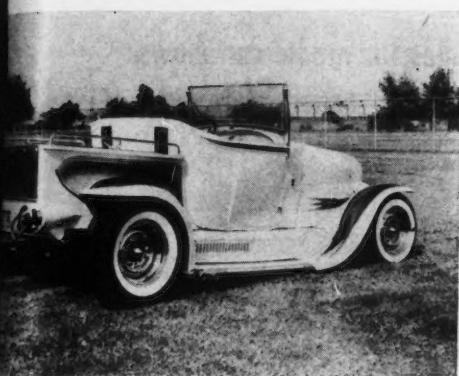
Left. Much chrome, polished aluminum is evident. Engine is .010 over; uses Robbins pistons, Grant rings. Ports are enlarged, polished, fed by custom manifold and Del Lorio carb. Compression ratio 8-1. Chopped flywheel, Webco clutch is run. Mag is Lucas.

Ultra light '54 Triumph uses 250 x 19 tires front and 350 x 19 rear when dragging slick is used. Single brake is on rear. Don has invested \$1800 and gives credit to B. Shaening, J. Bruford and B. Lappan in building Cannibal.



Photos by Bob Hegge

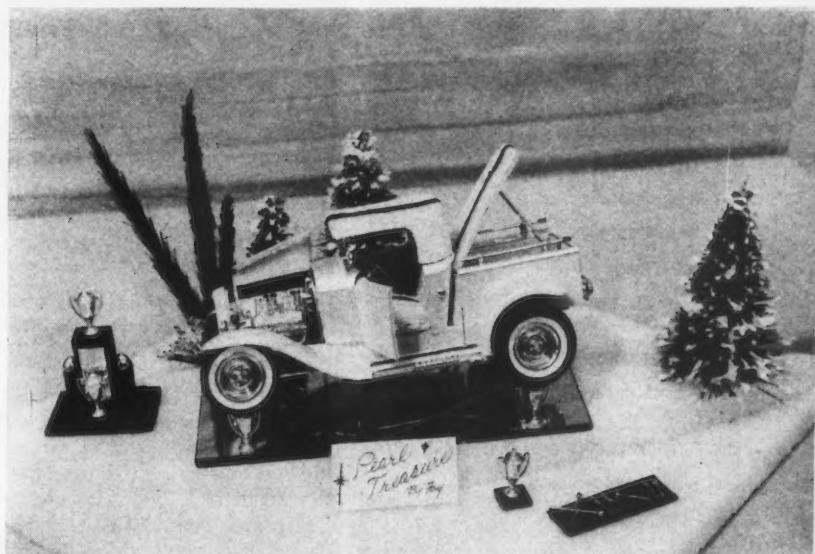




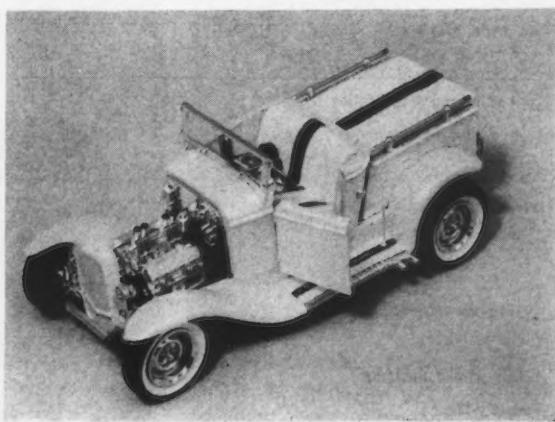
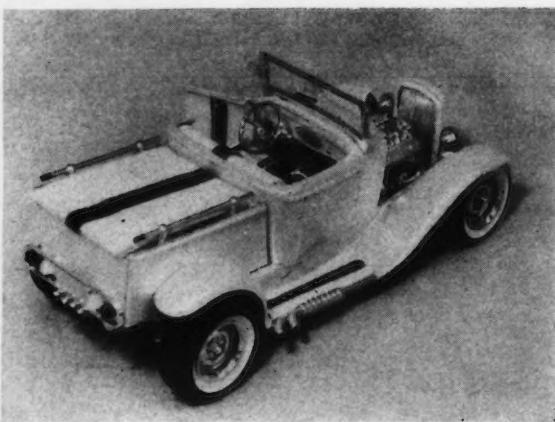
ALA KART—ONE OF THE COUNTRY'S TOP ALL TIME SHOW RODS DISPLAYED IN MINIATURE

MODEL CRAFT

THE RECEPTION THAT has been given to customized model cars is terrific. This wonderful hobby that is enjoyed by both young and old is growing by leaps and bounds. Because it is inexpensive it allows the young auto enthusiast to gain a thorough knowledge of cars, including its workings, the latest customizing trends, and to make up his own ideas and designs. The possibilities of styling are unlimited, as shown in the accompanying photos of Foy Pierce's '32 Ford roadster redesigned after the famous Ala Kart. Foy, a resident of San Bernardino, Calif., hand formed many parts from plastic, and balsa wood. Basis for car was an AMT '32 Ford roadster kit. Additional parts necessary in construction were taken from other AMT, Revell and Monogram kits. A natural for simulated rolled and pleated interiors is corduroy material which was also used in Foy's model. Heating the plastic parts also allows you to reshape them to a new design, such as custom exhaust pipes, nerf bars, roll bars, and grilles. You will note many custom details which Foy has made with a close inspection of his fine pickup.



Show display and life like appearance of Foy's model is typical of the realism that model car enthusiasts are building into their cars. Tiny mirrors reflect the chrome undercarriage. Show tools are from a '61 Falcon kit. Bed was hand formed from plastic and uses stained balsa wood for flooring. Exhaust system and mufflers are made from lakes pipes through heating and bending. Brake lines are made from copper wire. A very neat idea was used to make slicks, the center is a piece of smooth hard rubber, with the outside face of the regular tires slit off, then fitted and glued to hard rubber center.



MODEL CRAFT

New classification rules for model car shows

CLASSIFICATION

AGE

- Up to 11, Elementary
- 11 to 15, Junior
- 16 & over, Senior

CLASSES

MODERATE CUSTOM

'49 on up, any model, no modification other than included in the kit.

SEMI CUSTOM

'49 on up, any model, any part swapping and reformation.

FULL CUSTOM

'49 on up, any model, must include any of the following:

1. Body Chopping.
2. Top Chopping.
3. Body Channeling.
4. Body Sectioning.

HOT ROD CLASS

'22 to '32, any model and modification including rod pickups.

EARLY MODEL CLASS

'33 to '48, any model and modification (except full custom).

COMPETITION COUPES & SEDANS CLASS

Any model and modification.

DRAG CLASS

Any roadsters or dragsters and modifications.

RACE CAR CLASS

Any model and modification.

SPORTS CAR CLASS

Any model and modification.

PICKUP CLASS

'39 on up, any model and modification.

KARTS AND 1/4 MIDGET CLASS

Any model and modification.

CYCLE CLASS

Any model and modification.

ANTIQUES AND RESTORATION CLASS

Any model up to '31.

There should be five or more entries to make up a class or the exhibit will fall into the nearest class.

TROPHIES

1st, 2nd and 3rd (each class).

1 Sweepstakes Rod.

1 Sweepstakes Custom.

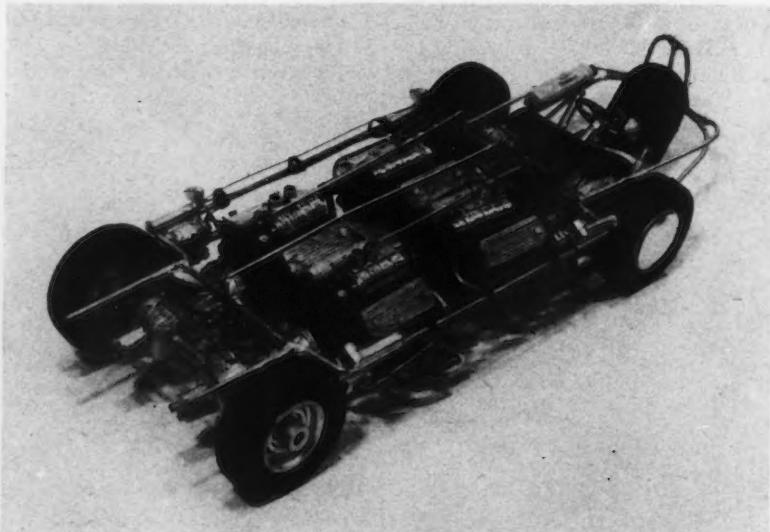
People's Choice.
Outstanding Display.



The Push Rods Car Club of Syracuse, N.Y. takes their 10 foot miniature drag strip to all shows in the area. The display features drag strip sounds and 83 models.

WITH THE TREMENDOUS growth of model cars, and their likeness of real customs and rods, car shows are a natural. The past few months have seen the model cars on display, and competing for trophies at the big rod and custom shows, and shows of their own. With expansion comes the need for proper classification. Mr. George Barris and the staff of Car Craft have formulated a set of classification rules to govern the model car shows. Having attended many model car shows we have seen the need for a fair and standard classification which should be used for all future shows.

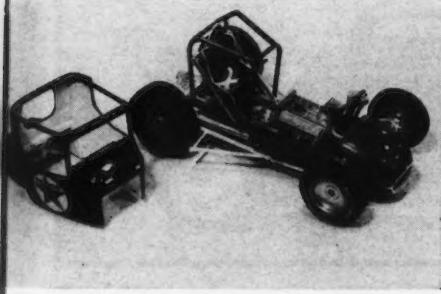
Mickey Thompson's Challenger? Yes, but it's a beautiful miniature replica of the real car. It was built with painstaking detail by Larry Hujo, Jefferstown, Ky.



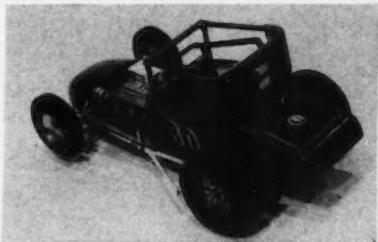
HOW TO RESTYLE

Radius wheel wells-trim trick for glamorizing miniature fender lines.

NOW WITH THE swapping of parts, such as lights, grilles, engines, trim etc., it is easy to come up with some really wild cars. This has especially been noted by us due to the response of you readers sending in some really terrific custom models, some of which we have photographed and can be seen on the following pages. Also George Barris whom you all know as one of the foremost builders of top custom cars, will give us his tips on customizing, and parts swapping in our Model Craft section each month. We have chosen two of the basic steps in customizing to begin with, filling holes and radiusing wheel wells. We will work into channeling, sectioning, frenching and chopping in later issues. So gather your tools and let's go.



Modified Sportsman was built by Alton Williams, age 17, from San Diego, Cal. Monogram kit was used. Roll bars were made from left over plastic tree in kit.



Model shows fine detail in workmanship. Wide tires in rear were made by gluing two together. Engine is Old's with blower. Steering wheel is from Indianapolis racer kit. Nose is handmade.



Trace outline of front wheel well onto cardboard pattern, or make new design.



Carefully cut out on marked area, pattern insures same lines on both sides.



Now trace outline to be used over rear wheel well. Hold same place each side.



Use pointed wire cutters or power tool to remove plastic from side of panel.

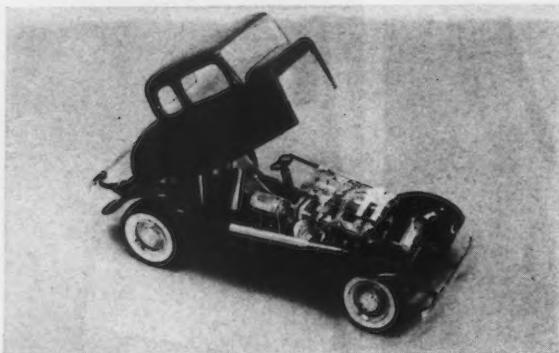


A half round or round file in some cases is used to smooth curve on rear well.

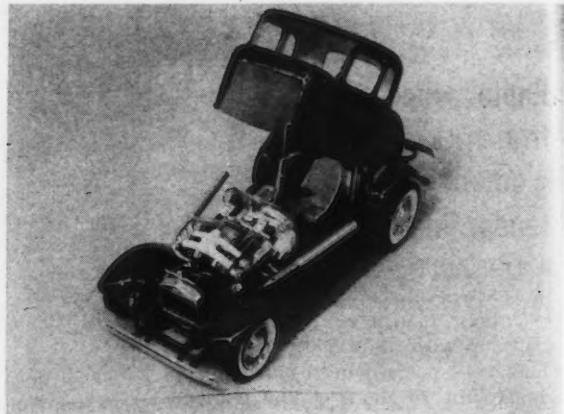


Finish off radius with fine sandpaper rounding edges of fender to finish job.

MODEL CRAFT

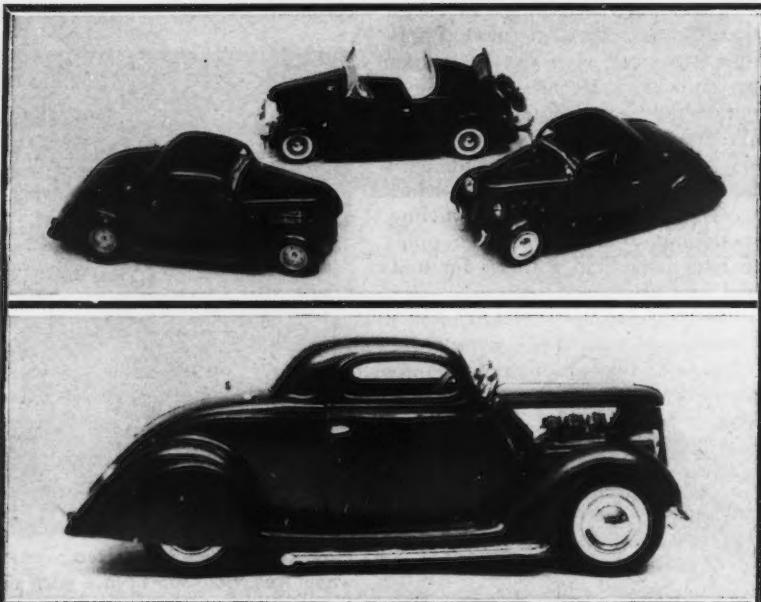


Immaculate '32 Ford competition coupe was built by Mike Cooley, age 18 of Riverside, Calif. AMT kit was used in construction. A raise up body is featured for engine work.

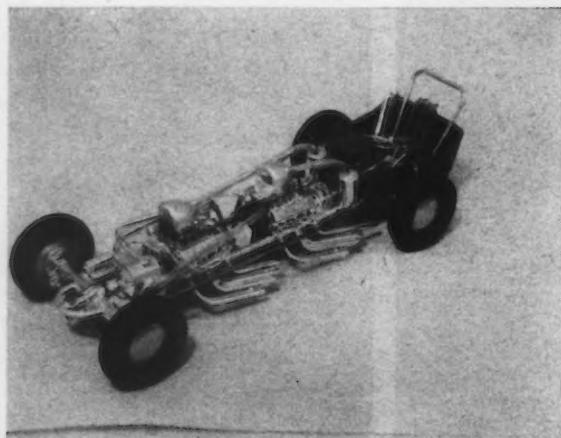


Note the use of model airplane gas line for radiator hose, and gas lines. Aluminum tubing is used for extended outside headers. Colored thread is used for wires, Lincoln mill run.

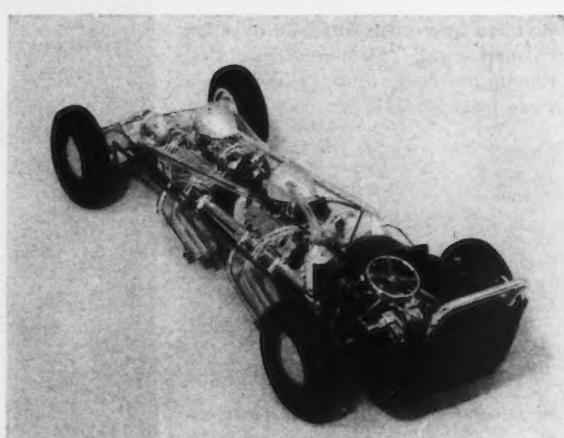
New from AMT is the '36 Ford 3 in 1 model car kit. Shown are actual models built from the model kit, left to right are; the competition coupe, the stock roadster, and the custom coupe. Kit is complete with chromed customizing parts, a stock flat head, and a big bore Pontiac engine included. Scale is 1/25.



The '36 Ford is one of the most famous cars that Henry Ford ever built. This is the custom street version, with chopped top, dual spats, lakes pipes, Pontiac mill, recessed aerial, skirts, and nerf bars. Paint is candy red.



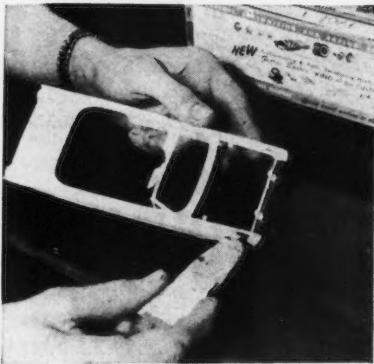
Twin engined Chevy dragster was also built by Mike Cooley. A Monogram kit was used for construction. Unique feature is front and rear wheel drive. Rails are aluminum tubing.



Painted thread made stiff is used for wiring. Blowers are 6.71 GMC with plastic tubing used for gas lines. Cockpit has full chrome treatment. Bucket seat covered in corduroy.

Filling trim holes for smooth body appearance is easy modification for both advanced and elementary model customizers.

FILLING HOLES WITH GLUE



Now apply several coats of styrene glue to build up holes above body surface.



Use a pointed X-Acto blade to concave edges of hole for better glue surface.



After concaving top of holes, use masking or scotch tape to back up holes.



After glue has thoroughly dried use a flat or round file to smooth out bump.



Finish with fine sandpaper making sure not to sand below hole, causing wave.

FILLING HOLES WITH WOOD BURNING TOOL



Now use tool as paddle, and smooth melted plastic contouring to body panel.



Advanced builder may use an electric drill with rotary file to concave holes.



Wood burning tool or soldering iron can be used to melt parts tree into holes.



Use file if necessary to smooth edges, taking care not to cause dip or wave.



Sand to perfection first using #320 grit paper, finishing off with #600.

ON YOUR MARK...



The BIG event of the drag racing calendar takes place at INDIANAPOLIS this year, at the world's auto racing capital. It's the 7th annual National Championship Drag Races, presented by National Hot Rod Association, the sport's official sanctioning body.

GET SET...



As usual, the Nationals will feature the absolute best in drag racing, with top drivers and the hottest cars from all parts of the country in competition. As an extra bonus, the Nationals will mark the grand finale of the official 1961 points season, with the new World Champion crowned and the sport's Top Ten determined.

GO!



Facilities and accommodations for fans and contestants will be superior to any ever seen at a previous Nationals event. Four big days of racing will make this the essence of Ingenuity In Action! So make your plans early and get ready for the

1961 BIG GO

NATIONAL CHAMPIONSHIP DRAG RACES

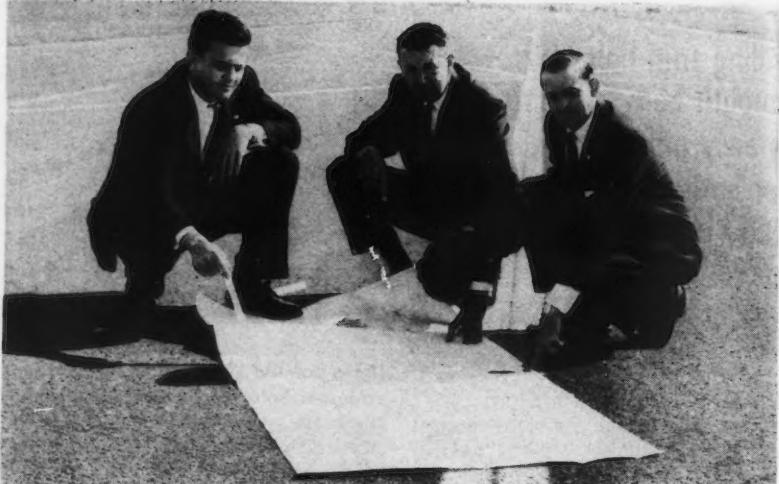
INDIANAPOLIS RACEWAY PARK

West of Indianapolis on Route 136

SEPT 1, 2, 3, & 4

Labor Day weekend

PRESENTED BY NATIONAL HOT ROD ASSOCIATION



The three NHRA officials who inspected and approved Indianapolis Raceway Park as site for '61 Nationals are, L to R, Ed Eaton, Wally Parks, Bob Daniels.

West Indianapolis Raceway Park Selected As Site For N. H. R. A. "BIG GO" 1961

HOT RODDING'S NUMBER-one event, the National Championship Drag Races, moves its location to Indianapolis this year, right in the realm of the "Capitol of racing." A brand new facility, known as the Indianapolis Raceway Park, was given approval by officials of National Hot Rod Association, producers of the Nationals, and will be undergoing extensive preparation to accommodate the huge turnout of contestants and spectators expected at this year's Big Go.

The new location promises facilities and conveniences far superior to any ever afforded a Nationals' event, this being the 7th annual, and there

is every indication that the '61 Big Go will top all previous Championships for color, interest and excitement.

3,700 feet of beautiful black asphalt has been installed, with ample runoff room and wide shoulders along each side. Spectator and parking areas are tremendous, located on each side of the course, with seating facilities that surpass all past Nationals' sites. Pits, staging and inspection areas have been designed to meet demanding requirements of the Nationals, with every effort being made to provide smooth-flowing operations during the entire event's proceedings.



Starting line view, looking toward finish line, shows expanse of paving and safety shoulder area provided at the new Indy Raceway 3,700-foot drag strip.

The drag strip, which is part of a huge new racing enterprise consisting of a $\frac{1}{4}$ mile oval track and a $\frac{1}{2}$ mile road racing course, is located within 30 minutes of downtown Indianapolis, within 10 minutes of the famed 500 Speedway, and within 15 minutes of the airport. Population within 25 miles of the strip is approximately 1 million, with adequate motels and tourist accommodations available nearby.

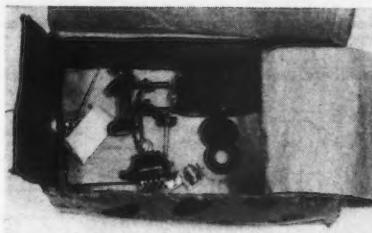
Dates of the '61 Nationals have been set for September 1, 2, 3, & 4, during the pre-Labor Day weekend — four days of top caliber drag racing at its absolute best, plus one full preceding day (August 31) set aside for registration, inspection and classification of entries. Benefits provided by improved Chrondek dual-lane timing and a streamlined operations system have assured the meet's sponsors that this year's Big Go can be successfully presented in the four days; Friday, Saturday, Sunday and Labor Day.

Anticipating a record number of entries, NHRA spokesmen have indicated that a limit of 500 may have to be set on acceptances. Official NHRA classes, as utilized at most strips and upon which all National Records and Championship points are based, will be in effect.

An added incentive for competitors at the Nationals will be recognized in the fact that the World Championship points season closes with the Nationals, with special double bonus points awarded to Nationals winners in all class categories. Thus the official 1961 World Champion and the year's "Top Ten" in drag racing will be finally determined at the Big Go, with the lion's share of major awards being won in these categories. Although class champions and eliminators will receive ample prizes and awards, much BIG emphasis will be on the season's high points winners. The biggest news — and hold onto your hats — is that the high point champion will be awarded a brand new 1961 Ford Thunderbird at the conclusion of the "Big Go." This is certainly one of the best prizes awarded for drag racing and well worth working for.

As for the "Big Show," there will be one again this year. As of this date the final selection of the location has not yet been made. We will, in the coming issues, keep you posted on the latest developments.

ATTENTION MODEL MAKERS



THE EDITORIAL OFFICES of Car Craft are daily witnessing a rather heartbreaking thing — we're being deluged with models that you readers have spent time, effort and money on, and think enough of to the point where you're sending them to us in hope that we can include them in the magazine. For the most part, they've been shipped to us in the boxes they came in when purchased at the model shop. Fellas . . . these boxes aren't nearly sturdy enough to withstand the rugged treatment they receive while going through the mails. Almost every model we've received has been badly damaged, and it's up to us to inform the owner that his pride and joy is a total wreck. This isn't a pleasant task, and it's one that we want to bring to a screechin' halt. So we're asking you to NOT send any more models to us.

What we're really interested in are good photos of your models. If we took pictures of every miniature that came in, our photo lab, while large and well-equipped, would have to work night and day just on this one thing. So we're asking you to do part of our job — the photography — for us. Here's your assignment: send us 8 x 10 glossy enlargements of black and white pictures of your work. A few tips on what we want:

1. Make sure they're sharp enough to show all of the details — remember, when you enlarge them, they get fuzzier, not clearer.

2. Don't clutter up the background with a lot of details. The outline and small details of the car itself disappear. Shoot 'em in front of a plain piece of white or dark-colored cardboard, depending on which contrasts with the color of the model.

3. Ask a studio photographer for hints on close-ups, or better yet, pick up one of the many booklets available on tabletop photography — who knows, you may discover a new hobby!

4. Send them to "MODEL CRAFT DEPT., CAR CRAFT MAGAZINE, 5959 HOLLYWOOD BLVD., LOS ANGELES 28, CALIF. Put 'em in a large envelope with a heavy cardboard stiffener, so they won't get damaged.

5. Mark on the outside, in large red letters. "PHOTOS — DO NOT FOLD OR BEND!"

6. If you want 'em back, add another large envelope, folded, with your name, address and sufficient postage.

7. Put your name, address and model information on the back of each picture.

NOW you're sending us something that we can probably use, and your model is safe at home. OK?

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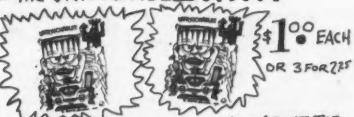
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WHAT'S YOUR PROBLEM?



By **Don Francisco**

BLOWER VS. SUPERCHARGER

Dear Don:

I have a 1934 Ford coupe with a 1956 Oldsmobile engine. The engine has been bored and stroked, has aluminum lifters, high-lift cam-shaft, three Stromberg 97's on an Edelbrock manifold, and an aluminum flywheel. It has its stock transmission and rear end. I have turned 85.77 in 15.30 seconds.

I have one question: What would be better for my car, a blower or a supercharger? What is the difference between them? What does each one do? How does each one work?

— David Barsell
Avon, Conn.

"Blower" is the slang term for supercharger. In other words, a blower is a supercharger, and vice versa.

Currently there are three different makes and types of blowers in use by hot rodders. These are the GMC positive displacement; the McCulloch, or Paxton, centrifugal; and the Latham axial-flow.

McCulloch, or Paxton, blowers are used more on passenger cars than for competition. The intake manifold boost they provide is considerably less than that possible with a GMC blower.

Latham blowers are also used primarily on passenger cars. They are the simplest of the blowers as far as moving parts are concerned and they can be rigged to provide a substantial pressure boost.

WHAT FITS WHAT?

Dear Don:

I have a 1958 Chevy 283 cubic inch engine. It is stock with a two-barrel carburetor, 8.5 to 1 compression ratio, and is rated at 185 horsepower.

My brother and I are planning to modify the engine. I'd appreciate it if you would take time to clear up some questions.

1. Is our 283 block the same as the Corvette 283 block?
2. If so, what year Duntov cam would fit?

3. What valve clearances are needed after changing from hydraulic to mechanical lifters?

4. What modifications are necessary to install the Corvette fuel injection pistons?

5. What year pistons would fit?

6. Can I use the same connecting rods that are presently in the engine?

7. Will Corvette pistons increase the compression ratio any?

8. What carburetion setup would you suggest?

— Jim Baerwalde
Parma, Ohio

Taken in the order you asked them, the answers to your questions are:

1. Yes. All Chevrolet 283 cylinder blocks are basically the same.

2. Any Duntov camshaft for a 265 or 283 cubic inch Chevy V8 will fit in your block.

3. Valve clearances Chevrolet recommends for Duntov camshafts in 283 engines are .012-inch for intake valves and .018-inch for exhausts, when the engine is hot. Les Ritchey, of Performance Associates in Covina, Calif., has experimented extensively with Duntov equipped Corvettes. He has found that the engines perform much better, especially for drag racing, when the lash is adjusted to .006-inch for the intakes and .014-inch for the exhausts, engine hot. Les is one of the best engine tuners in the Los Angeles area.

4. Fuel injection pistons will fit in your engine without modifications but their heavier weight will require that the crankshaft and rod and piston assemblies be rebalanced.

5. Any fuel injection pistons for a 3 1/8-inch bore would fit.

6. Yes, the same rods could be used.

7. Fuel injection pistons provide a compression ratio of 10.5 to 1 when used with cylinder heads rated at 9.5 to 1 with standard pistons. With your 8.5 to 1 heads the final ratio should be approximately 9.5 to 1.

8. The recommended carburetion setup for the engine would depend on how the engine is to be used. This could include anything from a single two-throat to six two-throats or some make of fuel injection setup.

MINOR DETAIL

Dear Don:

I am in the process of converting a '53 Mercury convertible 6-volt electrical system to a 12-volt system. My problem is the parts for the windows. Is there a universal 12-volt electrical harness, complete with accessories, that I can use for the windows?

— John H. Heidt
Miami, Florida

I wouldn't worry about converting your car's window motors to 12 volts. They don't have any effect on the way the car runs—as long as they move the windows up and down, they're great.

The easiest thing to do would be to install

CAR CRAFT

a 12-volt to 6-volt resistor in the electrical circuit that serves the motors. This resistor should be between the main source of current supply and the window motor circuit. In other words, all the circuit's components, including circuit breakers, the motors, and a relay that might be used, should receive 6-volt current.

Instead of using a resistor, 6-volt current for the windows could be taken from the 12-volt battery by installing a 6-volt tap in the battery's middle cell strap. This involves a little more work than installing a resistor; also, whenever the battery is changed a tap must be installed in the replacement.

JUST DON'T PUT SAND IN THE WAX

Dear Don:

I've had a problem that's been bothering me for quite some time and I'm hoping you can straighten it out.

I wax my car approximately every three weeks and maybe sometimes a little more often. A friend of mine told me that it is harmful to wax a car too often. He says that every time you put a coat of wax on a car it takes just a little bit of paint pigment off. He claimed that because of this waxing a car will have thin spots in the paint. Is this possible?

I've been using a paste wax. The car is a 1955 Chevrolet with the original paint job.

— Michael Wollersheim
Milwaukee, Wisc.

If you bought your car new in '55 and have waxed it at least once every three weeks since that time and it still has its original paint, I think that's all the answer your question needs.

But maybe you didn't buy the car new.

The purpose of paste and liquid waxes made for automotive finishes is to protect the finish. You could apply these every day without hurting the paint. The thing that gradually eats paint away is the abrasive action of liquid and paste cleaners made for preparing paint that is covered with road scum and other foreign matter for a coat of wax. Some types of polishes contain abrasive cleaner.

Repeated application of straight cleaner, or polish that contains cleaner, will eventually wear through the paint. This stuff acts in the same manner as a fine sandpaper. Straight wax will never hurt paint regardless of how often it is applied. However, if the old wax is removed with cleaner each time new wax is applied, the paint won't last long. This is unnecessary because once the surface is clean and thoroughly waxed a good dusting job or once over with a soft wet cloth will prepare the existing wax for another coat.

Rub your friend's nose in wax and send him home.

HERE'S THE PERFECT ANSWER

I own a '60 Chevy with a small 283 cubic inch V8, rated at 170 horsepower. The engine has a compression

ratio of 8.5 to 1 and a two-throat carburetor.

I would like to increase the performance of the engine without spending too much money. Is it possible to use thin copper head gaskets in place of the factory gaskets to raise the engine's compression ratio? Would you recommend three two-throat carburetors or one four-throat carburetor? The car will be used mainly for transportation.

Should I replace the camshaft and lifters, or should I retain the present cam and hydraulic lifters?

— Gary Briggs
Norwalk, Calif.

The answers to these questions and many more you may have about your Chevrolet are in my book, "How To Modify Chevy V8 Engines." For a measly two dollars you can have a copy of this book for your very own. Send the loot to Don Francisco Publishing Co., P.O. Box 47761, Los Angeles 47, Calif. Hurry.

CHECK THE MAN WITH THE WRENCH

Dear Don:

Can you tell me if it is possible to replace the 3.10 to 1 rear axle gears in a 1959 Thunderbird 352 with 4.10 to 1 gears without causing the axle assembly to make a humming noise? The car has a Cruise-O-Matic transmission. So far I've had the 4.10 to 1 gears installed twice and haven't had any luck.

One more thing I would like to know is would milling the engine's heads give it a little more zip?

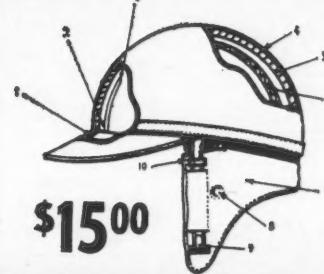
— Robert E. Carroll
Houston, Texas

The ratio of the gears in a rear axle assembly doesn't have any effect on the noise the assembly makes. Gears of any ratio will be noisy if they are adjusted so that there is too much or too little clearance between them. Other things that can make the assembly noisy are worn or defective gears or bearings. The bearings can be on the pinion shaft, the rear gear carrier, or the axle shafts.

Usually, switching a rear axle's ratio involves changing only its ring and pinion gears. All the bearings used with the original gears are also used with the new ones. For such a change any noise in the assembly after the change would usually be attributable to the adjustment between the gears. However, if the ring gear carrier and its bearings were changed along with the gears, possibly because the ring gear was already mounted on the carrier, it's possible that the bearings could be noisy. In other words, changing bearings as well as gears compounds the problem.

Milling cylinder heads is a method of increasing an engine's horsepower output by raising its compression ratio but there is a limit to the compression ratio any engine can use. I believe the standard ratio of '59 Ford 352 engines is high enough for service station grades of gasoline and normal driving.

NEW CLYMER SAFETY HELMETS



The "Sportsman"

1. Flexible Rubber Peak
2. Cushioned for Maximum Comfort
3. Soft Leather Headband
4. Glass Fibre Shell
5. 1/2" Polystyrene Shock Absorbent Lining*
6. Strong Canvas Harness
7. Full Chrome Leather Neck Curtain
8. Ear Membranes of Patent Design
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— Eddie Duane
Selma, Ala.

Taking your questions in order, with a little work the Hawk taillights can be made to fit. As for the grille, have the pot metal sand blasted then zinc chromate same, and it can now be painted. As for the noise, get some ordinary household under carpet. Apply a generous amount of underseal to floor panel and fire wall, stick matting to this. To install the R.C.A. record player get a transformer that increases 6V to 12V. This item can be purchased at any auto electric store.

THE TUBES MUST GO

Dear George:

I would greatly appreciate some professional tips. I own a '52 Olds convertible. It has a '55 engine, and a Caddy floor shift trans. My problem lies in the body. So far I have installed a '55 DeSoto floating grille, and louvered the hood. Which taillights should I use, what steering wheel can I use that has a modern look, what can be done with the compass on the dash? Also my car was converted from hydro to floor shift. What can I do to clean off the steering column?

— Charles Becker
Brooklyn, N.Y.

There are two taillights that will work into your Olds very nicely. One is the '56 Packard, and the other is a '55 Plymouth. As for a steering wheel use a later model Olds with a recessed center. It will bolt right on without any changes. A word of caution, in removing the old wheel you must use a steering wheel puller, it won't come off any other way. To mount your compass get a top dash unit from a '51 Chevy, this makes a neat installation. The easiest way to clean up the column is to make up a matching upholstered slip cover. Another way is to get a piece of plain or rippled pipe, and slip it over the shaft after having it chromed.

STUDE CUSTOM

Dear George:

I have a '55 Stude, and would like a little information. First, I would like to know if '57 Hawk taillights will fit my '55 Commander? Secondly my animal has got an awful mouth. Is there any way to make pot metal hold paint? If not what other grille could I use? Third I would like to know how to get rid of engine and muffler noise inside the car? I noticed a letter in custom queries asking about a record player. R.C.A. now puts out a 45 R.P.M. machine

First make a frenched scoop in front of the rear fender. Then cut the side trim short to about the middle of the front door. To do this purchase a right and left rear fender molding, cutting it short and using the formed tip in the front. Install a late model Chevy roof scoop. As for a grille, how about a vertical bar type from a '53 Buick? This will fit in very nicely.

SHOW ME THE WAY

Dear George:

I would like to know the answer to the following questions. I have a '56 Nash Ambassador, and I would like to change the rear lights without too much work and cost. Also I want to change the front parking lights in some way. What would be the best way to do this without changing the headlights, and the grille?

— Fred Brockway
Jacksonville, Fla.

A neat and easy way to make new taillights is to get some plain red plastic and form new lenses. These can also be enhanced by adding white horizontal cross bars. The same idea can be used in the front except make the lenses from clear plastic.

SIX EYED MONSTER

Dear George:

Having purchased a '61 Chev Impala, I am stuck with one problem.

The taillights make the car look like a six eyed monster. The article in the January issue of CC about installing '60 Bonneville lights on a '60 Impala interested me. Could the same idea be used on my '61 Chev? If this swap was made could the Bonneville lights be cut so as to allow the trunk to be opened? I was also wondering if the long Edsel taillights could be used? I also want to lower the car two inches all around. Should I use the spring collapses, or cut one or two coils off?

— Steve Woodward
Crystal Bay, Nevada

The '60 Bonneville taillights can be used. Follow the same procedure as outlined in the January issue of CC. As for the trunk opening the taillight can be slit, but keep lens close together — do not go by crack in trunk seam. To lower your car and still keep a good ride and handling qualities, use a lowering spindle kit.

FIFTY DOLLAR SPECIAL

Dear George:

I have a '50 Hudson tudor that I would like to customize. I don't like the grille or taillights, but would like to keep the cost below fifty dollars. Can you help me? I enjoy your magazine very much.

— Lee Olsen
Fallbrook, Calif.

A tubular floating grille can be cut to fit without much trouble. California Custom, 1807 65th Street, Los Angeles, Calif., can supply you with a grille, and a set of Cadillac taillights that also fit easily. The grille is \$19.50 and the taillights are \$12.95 each. That's under fifty dollars, and you still have enough left to buy some chrome dash knobs at \$.69 each.

WIDE TRACK TRIM

Dear George:

I have a '60 Pontiac hardtop. I am going to put in a floating bar grille. The hood latch is in the stock grille, what should I do? I am also going to remove the side trim. Should I leave the side plain or should I use another type of trim? If so what type?

— Larry Johnson
Portland, Oregon

The stock hood latch can be retained by removing the swinging latch part, and reversing it so that it may be operated by a cable control from the dash. As for the side trim I would use a double trim the same as you have, and possibly filling in the center with extruded aluminum.

COMING EVENTS

NHRA DRAG SCHEDULES

Gadsen, Ala. — Green Valley Drag Strip. Open 4/9; every Sun. thru Apr. Every Sat. night — May thru Sept.

Phoenix, Ariz. — Phoenix Drag Strip. Litchfield Rd. & Grand Ave. El Mirage, 2nd & 4th Sunday each month.

Carlisle, Ark. — Carlisle Dragstrip. 31 miles east of Little Rock. 2nd Sunday each month thru Oct.

Little Rock, Ark. — Little Rock Dragstrip. On U.S. 67-70. 3rd Sunday each month. May thru Oct.

Eureka, Calif. — Samoa Airport Eureka. 1st Sunday each month.

Madera, Calif. — Madera Airport. 2nd Sunday each month.

Mojave, Calif. — Kern Co. Airport No. 7. 4th Sunday each month.

Oroville, Calif. — Oroville Airport. 2nd & 4th Sundays each month.

Pomona, Calif. — Pomona Drags. Los Angeles Co. Fairgrounds. Every Sunday.

Redding Calif. — Redding Municipal Airport. 3rd Sunday each month.

Riverside, Calif. — Riverside Raceway. 1 mile So. of Junction U.S. 60 & 395. 2nd & 4th Sundays.

San Luis Obispo, Calif. — "Pride of the Pacific Drag Strip." 3rd Sunday each month.

Santa Maria, Calif. — Municipal Airport. 2nd Sunday each month.

Visalia, Calif. — Visalia Airport. 4th Sunday each month thru Oct.

Castle Rock, Colorado — Continental Divide Raceway. 25 miles South of Denver. 1st & 3rd Sundays, May & June.

Julesburg, Colo. — Platte Valley Dragstrip. 2 miles West of Julesburg. 4th Sunday, May & June.

East Haddam, Conn. — Connecticut Dragway. Off route 16 from Colchester Center. Every Sun.

Davie, Fla. — Davie Drags. 10 miles west of Ft. Lauderdale. 2nd & 4th Sundays each month.

Daytona Beach, Fla. — Spruce Creek Dragstrip. Southwest of City. 2nd & 4th Sundays each month.

Green Cove Springs, Fla. — Thunderbolt Raceway. 10 miles N. of Green Cove on U.S. Hwy. 17. 1st & 3rd Sunday.

Kissimmee, Fla. — Kissimmee Airport. 1st & 3rd Sundays each month.

Miami, Fla. — Amelia Earhart Field. 1st & 3rd Sundays each month.

Alton, Ill. — Alton Dragway. 1 mile off Route 140 on Fosterburg Road. Every Sunday.

Indianapolis, Ind. — Indianapolis Raceway Park. 5 miles N.W. of Indy on State Rt. 136, Clermont. Every Sunday.

Muncie, Ind. — Muncie Dragway. 4 miles N.E. of Muncie, on State Rt. 67. Every Sunday.

Hammond, La. — Hammond Airport. 4th Sunday each month.

Opelousas, La. — Pei State Drag Strip. 2nd Sunday.

Sanford, Maine — Sanford Airport. 2nd & 4th Sundays each month.

Orange, Mass. — Orange Municipal Airport. 3rd Sunday May thru Oct.

Detroit, Mich. — Detroit Dragway. Dix-Toledo Hwy. & Sibley Rd. Every Sun.

Minneapolis-St. Paul, Minn. — Minnesota Dragway 3 miles east of Anoka on hwy. 242. Every Sunday & holiday thru Oct.

Butte, Mont. — June 25. July 30, Aug. 27.

Grand Island, Neb. — Grand Island Jaycee Dragstrip. 2 miles east on Hwy. 30 & 1/4 miles north of Grand Island. 6/17, 18.

Scottsbluff, Neb. — 7/16; 9/3; 23-24.

Omaha, Neb. — Omaha Dragway. 6/11, 25.

Atco, N.J. — Atco Dragway. Jackson Rd. Every Sunday.

Great Meadows, N.J. — Island Dragway. On Route 46. Every Sunday, weather permitting.

Hobbs, N.M. — Charoiteers Dragway. Hobbs AFB, 1st Sunday each month.

Roswell, N.M. — Walker AFB. Sundays thru Oct.

Cicero, N.Y. — Esta Safety Park. Eastwood Rd. Half mile So. of Rt. 31, between Cicero & Bridgeport. Every Sunday.

Cincinnati, Ohio — Beechmont Dragway. Rts. 74 & 125 off Beechmont Levee. Every Sunday.

Thompson, Ohio — Thompson Dragstrip. S.W. of Painesville on State Rt. 528. Every Sunday.

West Salem, Ohio — Dragway '42. 25 mi. S.W. of Akron, on State Rt. 42, 3 mi. off Interstate 71. Every Sunday.

Oklahoma City, Okla. — Joyce Dragway. Oklahoma State Fairgrounds. Every Sunday, weather permitting.

Tulsa, Okla. — Tulsa North Airport. 6/4, 18.

Bedminster, Pa. — Vargo's Dragway. Bedminster Township, Bucks Co. Every Sunday thru Oct.

York, Pa. — U.S. 30 Drag-O-Way. 6 miles west of York on U.S. 30 Every Saturday nite.

Charlestown, R.I. — 7 miles S.E. of Westerly on Rt. 17/8, 9; 8/6; 10/1.

Abilene, Texas — Abilene Dragstrip. 2 mi. so. of Hwy on F.R. 707. 3rd Sunday each month.

Amarillo, Texas — Amarillo Dragway. 7 miles So. on Washington Ave. 2nd & 4th Sunday each month.

continued on page 74

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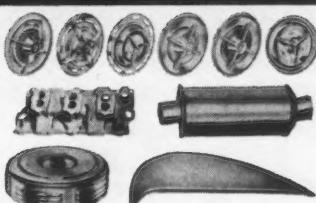
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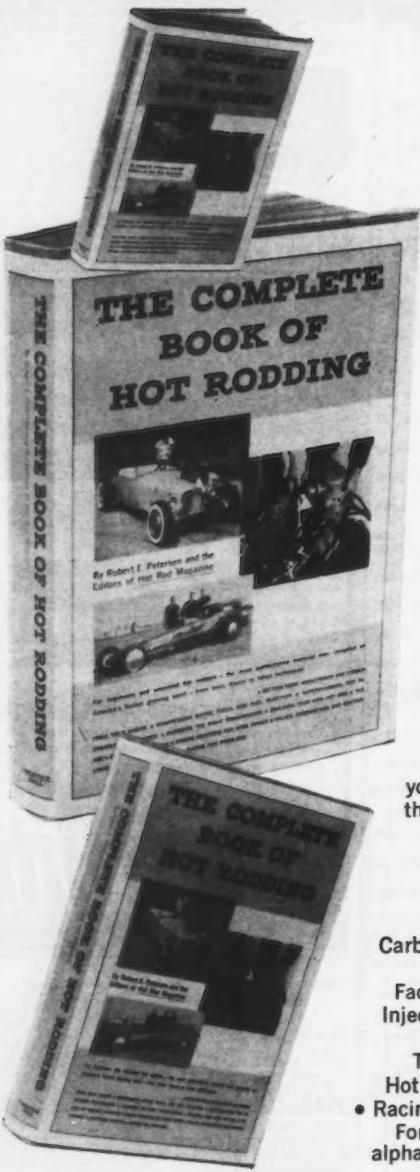
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Pampa, Texas — Sidewinder Dragway. 5 miles south of Hwy. 70. 1st & 3rd Sundays each month.
Wichita Falls, Texas — Red River Drag Strip. 2nd Sunday each month.
Emporia, Va. — Emporia Dragstrip. Every Sunday.
Lynchburg, Va. — New London Drag Strip. 15 miles west of Lynchburg. Every Sunday thru Oct.
Peterburg, Va. — Eastern Dragway. 1st & 3rd Sat.
Cheyenne, Wyo. — Cheyenne Dragway. On U.S. 85. 6/11; 7/9; 8/5, 6; 9/10
Caguas, Puerto Rico — Antilles Auto Racing Track. 2nd & 4th Sundays each month.

SHOWS

Long Beach, Calif. — July 4-9; 4th Annual Rod & Custom Autorama, Long Beach Municipal Auditorium, P.O. Box 2641, Long Beach.
Los Angeles, Calif. — July 8-9. 2nd Annual Auto Show, 851 Chavez Ravine Road, U.S. Navy, Los Angeles, Calif. — July 8-9. U.S. NAVAL RESERVE, 2nd Annual Autorama, 851 Chavez Ravine Road.
Dodge City, Kansas — July 22-23, West Kings Car Show, Municipal Auditorium, West Kings Car Club, 210 E. Briar, Dodge City, Kansas.
West Springfield, Mass. — June 24-25; Eastern States Coliseum, Falcons & Wheeler, 47 Decatur St., Indian Orchard, Mass.
Worcester, New York — July 2. Auto Pan-O-Rama, Legion Field, Super-Chargers Car Club, 220 Main Street.
Lima, Ohio — June 24-25. 4th Annual Rod & Custom Review, Allen County Fair Grounds, P.O. Box 537. Charleroi, Penna. — June 23-25; Bee Hive, R.R. 88. Man Valley Timing Assn. 22 Jackson Dr. Mansfield, Pennsylvania.
Kenosha, Wisc. — June 25. Viscounts Auto Show, Kenosha Lakefront Stadium. Viscounts Club, 6243 35th Ave., Kenosha, Wisc.
Casper, Wyo. — August 12-13. 5th Annual Kustoms Karama, Central Wyoming Fairgrounds, Kustom Auto Club, Box 2202.

DIVISIONALS

Riverside, Calif. — June 11
Oklahoma City, Okla. — July 1 & 2
Kent, Wash. — July 15 & 16
Atco, N.J. — July 22-23
Castle Rock, Colo. — July 29-30

REGIONALS

Arlington, Wash. — June 10-11
Ft. Worth, Tex. — June 11
York, Pa. — June 17
Thompson, Ohio — June 17-18
Charlestown, R. I. — July 8-9
Detroit, Mich. — July 8-9
Amarillo, Tex. — July 22 & 23
Minneapolis, Minn. — July 29-30
Caddo Mills, Tex. — Aug. 6
McMinnville, Ore. — Aug. 19-20
Muncie, Ind. — Sept. 9-10
Abilene, Tex. — Sept. 16 & 17
York, Pa. — Oct. 7

QUARTER MIDGET ANNOUNCEMENT

The All Stars QMRC are holding their second "Eastern Black-Top" championship, Saturday, July 15th. There will be two classes — Stock and B Modified. National Rules will prevail. The track is 1/20th mile banked asphalt, situated 10 miles north of Willow Grove on Route 263 at Furlong, Pennsylvania. Gates open at 8:30 A.M. for signing in. Stocks will run in the afternoon, B Modifieds at night. Deadline for signing in for both classes is 11:00 A.M. For further information, write: Ken Howard, 175 S. Hawthorne Ave., Langhorne, Pennsylvania.



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